1044b UIC - EAST POPLAR OIL FIELD
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[redacted]

PRODUCTION DEPT.
FILE COPY

MURPHY CORPORATION, ET AL.

EAST POPLAR UNIT WELL NO. 26

ROOSEVELT COUNTY, MONTANA

Geology File Copy

MURPHY CORPORATION

EAST POPLAR UNIT WELL NO. 26

SW/4 NE/4 Section 23, Township 28N, Range 51E
Roosevelt County, Montana

Elevation 2194' KB.

History

Electro Log Data

Core Descriptions

Drill Stem Tests

Sample Description

Drilling Bit Record

Totco Record

Diamond Core Bit Record

Completion History

Mud Program Summary

EAST POPLAR UNIT WELL #26

Location:	C SW NE Sec. 23-T28N-R51E, Roosevelt County, Montana
Elevation:	2194 KB
Spudded:	July 7, 1953
Completed:	August 8, 1953
Total Depth:	5935' Driller = 5943' Schlumberger = 5932' Lane-Wells 5930' PBTD

HISTORY

July 7:	Spudded and drilled to 50' with 12¼" jet rock bit.
July 8-10:	Drilled from 50' to 1020'.
July 10:	Ran Schlumberger Electrical Survey. Set 1001.55' of 9 5/8" casing at 1014.55' with 400 sacks of bulk cement. Bumped plug with 1000#, held okay.
July 11:	WOC
July 12-16:	Drilled from 1020 to 3850'. Depth Correction: 3850 = 3860 SLM.
July 16-27:	Drilled from 3860 to 5615'.
July 27-28:	Cut and pulled Core No. 1, 5615-5650, rec. 35.
July 28-29:	Ran DST #1, 5620-5629.
July 29-30:	Drilled from 5650-to 5730'.
July 30:	Cut and pulled Core No. 2, 5730-5788, rec. 58'.
July 31:	Ran DST #2, 5750-5773.
August 1:	Ran DST #3, 5731-5773.
August 1-2:	Drilled from 5788-5890'.
August 2-3:	Cut and pulled Core No. 3, 5830-5935, rec. 35'.
August 3-4:	Ran Schlumberger E.S. and Microlog.
August 4:	Set 5927.90' of 5½" pipe at 5905.45', with 250 sacks of cement. Plug down at 10:18 P.M., 8-4-53.
August 5-7:	WOC
August 7:	Ran Lane-Wells Radioactivity Log.
August 7-8:	Well undergoing completion. Rig released 9:15 A.M., 8-8-53.

ROCKY MOUNTAIN DISTRICT
Report by M. T. James
August 24, 1953

HISTORY COMPLETION

E.P.U. NO. 26

July 8, 1953; Drilling at 50 feet. Spudded at 3:00 A.M. 8-8-53.

July 10, 1953; 1021'. W.O.C. Ran 25 joints (1001.55') 9 5/8 ", 36#, J-55, 36#, 8 rd. thd., R-3 Class A Spang Casing. Landed 13' below RKB with Larkin Float Shoe at 1014'.55' 2 Baker Centralizers at 770 feet & 994 feet. 3 D&W Multi Flex scratchers at 830 feet to 900 feet and 950 feet. Cemented with 400 sacks, Atlas Bulk cement. Bumped plug with 1000#, Released pressure. Held okay. Circulated clean cement to surface. Plug down at 9:00 P.M., 7-10-53.

July 29, 1953; D.S.T. No. 1 with Johnston tool. 5620' to 5629', straddle packers, ½" bottom choke, no W.C. Open tool at 5:47 P.M. for 4 hours, closed 20 minutes. Open with good blow (bottom 5 gal. bucket 4 minutes) good blow throughout test. Gas to surface 2 3/4 hours. Reversed out 1400' clean oil, 2500' salty sulphur water with good show of oil, 1407' salty sulphur water with trace of oil; Chloride 97,000 PPM. IBHFP-250#, FBHFP-2300#, BHSIP-2900#, Hydro. 3250#.

August 1, 1953; 5788 feet. D.S.T. No. 2 with Johnston. 5750 to 5773. Straddle packers, ½ inch bottom choke, no water cushion. Open tool at 11:20 A.M. for 2 hours. Closed 20 minutes. Tool open with fair blow (bottom 5 gal. bucket 8 minutes) increased to good blow 10 minutes, continued rest of test. Recovered 279 feet muddy salt sulphur water with trace of oil. 651 feet salty sulphur water with trace of oil. 1570 feet salt sulphur water. Chl. 95,000 PPM. IBHFP-0, FBHFP-1200, BHSIP-2800#, Hydro-3300. Bottom packer held okay. D.S.T. No. 3 with Johnston. 5731 to 5744, ½ inch bottom choke, no water cushion. Open tool at 4:05 A.M. for 4 hours. Closed 20 minutes. Tool open with weak blow (under 3 inches water). Gas 1828 from surface. Recovered 62 feet clean oil. 93 feet muddy salt sulphur water with trace of oil. 121 feet salty sulphur water. Chl. 65,000 PPM. No flow pressure. Clock stopped. BHSIP-2600#, Hydro-3300#. Going in hole with bit.

August 4, 1953; 5943 feet Schlumberger. 5935 feet driller. Preparing to run casing. D. D.T. No. 4 with Johnston. 5888 feet to 5919 feet with straddle packers, ½ inch bottom choke, no water cushion. Open tool at 1:10 P.M., 8-3-53, for 4 hours. Closed 30 minutes. Tool open with fair blow (5 inches water in 10 minutes) throughout test. Gas 4773 feet down. Recovered 837 feet oil and gas cut mud. Abundance of oil, not salty to taste. 279 feet oil and gas cut mud with salty taste. Filtrate Chloride 20,000 PPM. IBHFP-50# FBHFP-450# BHSIP-3050#. Bottom packer leaked down to 2200#. Apparent through small fractures.

August 5, 1953; 5943 feet. W.O.C. Ran 190 joints (5927.90') 5½ inch, 15.50#, J-55, 8 rd. thd., R-2 Class "A" Youngstown casing; landed 12.10 feet below RKB with Larkin float shoe at 5940 feet, Larkin float collar 5905.45 feet. Four Larkin centralisers at 5592', 5687', 5849', and 5928'. 120 feet Howco Roto-wall scratchers 5599'-5614'; 5620'-5635'; 5722'-5737'; 5743'-5753'; 5761'-5781'; 5879'-5899'; 5911'-5926'; 5929'-5930'. Cemented with 250 sacks, 50% Pozmix, 50% Regular Ideal cement, with 2% Jel. Bumped plug with 1000#. Released pressure, held okay. Plug down 10:18 P.M., 8-4-53. Unable to rotate pipe, stuck after checking bottom. Note pipe set on Schlumberger measurement. Casing T.D., checked 5935 feet.

August 8, 1953; 5932 Lane Well. Drilled plug float collar at 5902 tubing measure. Drilled out cement to 5930. Tubing equals 5932 Lane Wells. Ran Gamma Ray Neutron and Collar Log. Perforated C zone 5899 to 5908.5 with 4 jet shots per foot shot on Lane Wells measure. Ran 193 joints (5884.53) 2 3/8 inch, EUE, 4.70#, J-55, 8 rd. thd., R-2 Class A American Tubing with 3.42 perforation, nipple bull plugged. Landed 10.10' below RKB. Top joint tubing 31.29, 192 joints tubing (5853.24). Perforated. Nipple bull plugged 3.42. Bottom of tubing 5898.05. Displaced mud with water, water with oil, open to test tank 1:00 A.M. to 5:00 A.M. Flowed 9 barrels displacement oil. TSIP-875. Acidized C zone 5899 to 5908.5 with 1000 gallons, 15 percent Regular Dowell acid. Formation started taking acid at 1800#. Displaced 5 barrels per minute at 2000#. Bled down to 800# and open to pit at 5:56 A.M. Flowed spent acid to surface 8 minutes. Fresh oil 24 minutes. Open to test tank 6:55 A.M., 40% water. Chl. 4,500 PPM. 8-8-53, 45 minutes test open flow, 55.50 barrels fluid, 30%. 1 hour test, 14/64 choke, 30.00 barrels fluid, 25 % water. Chl. 5,800 PPM., TFP-450, CP-650. Released rig at 9:15 A.M., 8-8-53.

E. Poplar, C. H. MURPHY, JR. ET AL #26 E. Poplar Unit, Miss. test (OIL)

Location: 23-28N-51E, C SW NE

Spud [illegible]; Comp 8-8-[illegible]; [illegible] grd 2192' (KB), TD 5940'

Csg [illegible] 5/8"-1011' w/400 sx; 5½" [illegible] w/250 sx

Pro[illegible] (Miss.) thru perfs 5899-5908'

IP: 55.5 BF, 30% wtr in 1 hr thru 14/64" ch, TP 450#, CP 650#

Comp Info: crd 5615-50', rec 35', being 5' hd & dse li, 7' li w/frac & oil show, good por & perm, 4' li, med to coarse xln, good poro & good SO, 3½' li, xln, fair SO, 3½' li, ool, good poro & perm, 4½' anhy, hd & dse, 5' dolo sli por, 1' anhy, hd & dse, 1½' dolo; DST 5620-29', op 4 hrs, gas 2 hrs 45 mins, rec 1400' clean oil, 2500' HOCSW, 1407' SW w/trace oil, FP 250# 15-min SIP 2300#, HP 2900#; crd 5730-88', rec 56', being 2' anhy, 7½' li w/fair por & perm, sly SO, 8½' anhy, 21' li w/good frac, SO in top 11', 5' dolo, 2' anhy, 2½' dolo, 3' dolo, hd & dse; DST 5750-73', op 2 hrs, rec 279' muddy SW w/trace oil, 651' SW w/trace oil, 1570' SW, FP 1200#, 20-min SIP 2800#; DST 5731-44', op 4 hrs, gas 1828' fr surf, rec 62' clean oil, 93' muddy SW w/trace oil, 121' SW; crd 5890-5935', rec 43', being 1' li, 18' li w/fair por, good SO, 24' hd, dse li; DST 5888-5919', op 4 hrs, gas 4773' fr surf, rec 837' HO&GCM, 279' O&GCM w/salty taste, FP 50-450#, 30-min SIP 3050#; A/1000 gals.

Tops: Elec Log: Niob 2080, CH 2426, Granos 2637, U/Muddy 2797, Muddy 3008, Skull Cr 3053, Dak silt 3203, Swift 3678, Rier 4004, Piper sh 4365, Piper li 4442, Gyp Sprgs 4498, Spearf 4700, Ams 4830, Heath 4940, Otter 5111, Kib sd 5256, Kib li 5391'.

F.-E #26

A.F.E. No. 53-68

AUTHORITY FOR EXPENDITURE
MURPHY CORPORATION - EAST POPLAR UNIT NO. 26
C SW NE Sec. 23, Twp. 28N, Rge. 51 E, Roosevelt County, Montana

WELL DRILLING & CONSTRUCTION EXPENSE:	TO CSG. PT.	COMP. & EQUIP.	TOTAL COST
Drilling: Footage - 5900' @ $7.50/ft.	$ 44,250	$	$ 44,250
Daywork - 4 days & 2 days @ $900/day	3,600	1,800	5,400
Loc. survey, permit & prep.	300		300
Roads, fences, cattleguard, etc.	350		350
Mud mat. & chem., incl. oil & gas	3,000		3,000
Drilling bits, baskets, etc.		200	200
Cementing casing	1,250	950	2,200
Coring materials & services	600		600
Testing services, incl. swabbing	600	200	800
Other logs, surveys & analyses	1,400	650	2,050
Perforating services		600	600
Hydrafrac, acidize, etc. incl. oil		2,200	2,200
Float equip., centralizers, etc.	125	250	375
Trucking, welding & other labor	500	900	1,400
Supervision & Miscellaneous	1,475	500	1,975
Total Est. Well Drlg. & Const. Exp.	$ 57,450	$ 8,250	$ 65,700
WELL EQUIPMENT COSTS:			
Casing: 1000' of 9-5/8" O.D.	$ 3,300	$	$ 3,300
Casing: 6000' of 5-1/2" O.D.		13,200	13,200
Tubing: 6000' of 2-3/8" O.D.		3,300	3,300
Casing head & connections	300		300
Xmas tree & connections		1,100	1,100
Total Est. Well Equip. Costs	$ 3,600	$ 17,600	$ 21,200
Total Est. Cost of Well	$ 61,050	$ 25,850	$ 86,900
LEASE EQUIPMENT:			
Flow lines, installed	$	$ 1,200	$ 1,200
Other line pipe, valves & fittings		300	300
Trucking, welding & other labor		800	800
Total Est. Cost of Lease Equipt	$	$ 2,300	$ 2,300
TOTAL EST. COST OF WELL & LEASE EQUIP.	$ 61,050	$ 28,150	$ 89,200

APPORTIONMENT OF TOTAL ESTIMATED COSTS

Carter Oil Company	16.335860	9,973	4,599	14,572

APPROVAL OF EXPENDITURE

Production Department

Requested by _____
Date _____

Approved by R. C. Curtis
Date _____

Executive Department

Approved by _____
Date _____

Approved

_____

By _____

Date _____

AWS:PD
5-25-53

Carter's AFE Number is 4008 project 53.32

M. T. Jones / File EPU #26

A. F. E. No. 1-1599

AUTHORITY FOR EXPENDITURE
MURPHY CORPORATION - EAST POPLAR UNIT No. 26
SW/4 NE/4 Section 23, T28N, R51E, Roosevelt County Montana

(Workover #1)
(To Squeeze Casing Leak and C-Zone)

Pulling Unit 10 (10 hr.) days @ $280 per day	$2800
To squeeze 100 sks. cement and 40 sks. Latex cement. (Pump truck and material)	1700
2 Cement retainers set on W.L. and service	1050
Perforate 2 jobs	775
2 Acid jobs 1000 gal. and 500 gal. and service	1175
Misc. trucking, labor and material	600
TOTAL ESTIMATED COST	$ 8100

Present Status: Shut In. 5½" Casing collapsed or parted in the salt section at 5691'. The condition of the tbg. that was pulled through the bad place in the casing was rain-bowed indicating that the casing was parted or out of line from salt shifting, and it is doubtful that the casing could be repaired economically enough to justify the expense of repairing (if possible, without going out of casing) casing to produce the C-Zone and the prospect of making a well in the B-1 Zone.

History: Completed August 8, 1953 from C-Zone perforations 5899-5908.5'. Accumulated production through August, 1961 BO 112,174 - BW 875,407. Production average before going to 100% Wtr., 24 BOPD - 564 BWPD, 96% Wtr. cut.

Proposed Workover: Set C. I. cement retainer at 5660' on W. L. Squeeze casing leak and C-Zone perforations w/100 sks. cement. Perforate the A-4 5637'. Acidize w/1000 gal. through C.I. cement retaining block. Squeeze w/40 sks. Latex cement. Pressure test squeeze. Perforate the top of the A-4 Zone 5626-31'. Swab test through retrievable packer, and acidize with 500 gal. if needed.

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Corporation	31.448470%	$2,547
Muncco Company	2.096565%	170
Placid Oil Company	33.545035%	2,718
Humble Oil & Refining	16.335860%	1,323
Drilling Specialties	16.335860%	1,323
C. F. Lundgren	.238210%	19

APPROVAL OF EXPENDITURE

Requested by: M. J. Jones — Field Production Superintendent — 10-23-61

Recommend Approval:
Harold Miller — 10-27-61
Division Production Supt. — Date

Recommend Approval:
Staff Production Man — Date

Recommend Approval:
R. L. Martin — 10/30/61
Division Manager — Date

Recommend Approval:
Budget Supervisor — Date

Approval:
Vice President - Operations — Date

MTJ:rp
10-23-61

All approvals received as of 12-23-61

Form No. 2
GENERAL RULES
201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)
TO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE!
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

RECEIVED
APR 10 1962
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	
		Workover History #2	XX

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

April 3, 1962

Following is a ~~notice of intention to do work~~ report of work done on land ~~owned~~ leased described as follows:

LEASE BLM-A-012245

MONTANA (State) Roosevelt (County) East Poplar (Field)

Well No. 26 C SW NE Section 23 (m. sec.) 28N (Township) 51E (Range) M.P.M. (Meridian)

The well is located 1980 ft. from { N / S } line and 1980 ft. from { E / W } line of Sec. 23

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is 2194 K.B.

READ CAREFULLY — DETAILS OF PLAN OF WORK — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

See Attached Sheets

RECEIVED
APR 5 - 1962
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA • BILLINGS

Approved subject to conditions on reverse of form
Date 4-9-62
By [signature] Supt
Title
District Office Agent

Company Murphy Corporation
By [signature]
Title Field Production Superintendent
Address P. O. Box 547, Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

OVER

Locate well by [illegible] tage measurement from legal subdivision li[illegible], lease or property line and nearest drilling or producible well, if any.

Form No. 2
File at
Billings
or Shelby

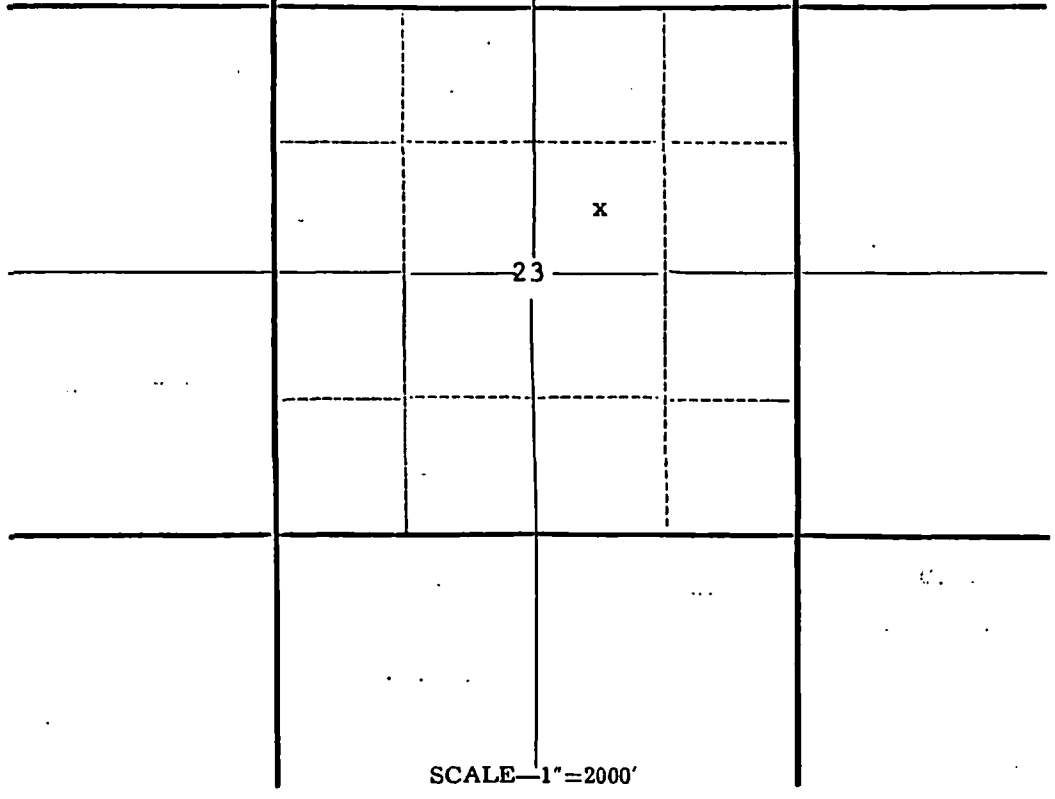
Rge. 51E

Form No. 2
File at
Billings
or Shelby

Locate
Well
Correctly

Locate
Lease
Boundary

Twp. 28N



SCALE—1"=2000'

THE NOTICE OF INTENTION TO DRILL THIS WELL IS APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:

1. Any person, before commencing the drilling of any oil or gas well, shall secure from the commission a drilling permit and shall pay to the commission therefor for the following amounts: for each well whose estimated depth is thirty-five hundred (3500) feet or less, twenty-five dollars ($25.00); from thirty-five hundred and one (3501) feet to seven thousand (7000) feet, seventy-five dollars ($75.00); seven thousand (7000) feet and deeper, one hundred fifty dollars ($150.00).
2. No well is to be spudded in unless the proper surety drilling bond has been posted and approved by the Oil and Gas Conservation Commission of the State of Montana.
3. Cable tool operators must construct an adequate sump to contain all mud and water bailed from the hole.
4. Surface or conductor casing must be properly cemented by an approved method to act as a tie in case an unexpected flow of oil, gas, or water should be encountered, unless special permission has been granted for formation shut-off.
5. Any contemplated change in status of a well such as to plug and abandon, deepen, plug back, redrill, alter casing, etc., must be presented on Sundry Notices and Report of Wells form for approval by agent prior to commencement of work.
6. All substantial showings of oil or gas must be tested for commercial possibilities before drilling ahead. Each such showing must be adequately protected by casing, mud or cement, as drilling progresses.
7. The production string must be cemented unless a formation shut-off or packer is approved by the agent. Sufficient cement must be used to protect the casing and possible productive formation exposed in the process of drilling not otherwise protected.
8. All production strings of casing must be tested by bailing or pressure to determine if there is a tight bond with the formation or possible leaks in the casing. The results of the test must be reported on Sundry Notices and Report of Wells form, said report to include the size, weight, thread and length of casing, amount of cement used, and date work is done. If test shows failure, the defect must be corrected before any drilling operations are resumed.
9. A satisfactory drilling record must be kept for each tour, showing top and thickness of each and all formations drilled and all other information of value, one copy of which is to be kept at the rig while drilling is in progress for examination when an agent visits the well.
10. All producing wells must be marked with name of the operator, number of the well, and location, using reasonable precautions to preserve these markings at all times.
11. Copies of all directional surveys, electrical logs; or tops from electrical log if electric survey is run, formation tests, and cementing record, as furnished by the cementing company, etc., must be filed with the State Inspector of the district together with four copies of the log, upon completion of the well.
12. All work must be done in conformity with the regulations of the Oil & Gas Conservation Commission of the State of Montana, as contained in "General Rules and Regulations," and amendments thereto, as well as regulations prescribed in lieu thereof.

Form No. 2
GENERAL RULES
201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)
TO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE!
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THIS COMMISSION.

RECEIVED
OCT 1 1962
OIL & GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well (Temp.)	xx	Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

September 21, 1962

Following is a {notice of intention to do work / report of work done} on land {~~owned~~ / leased} described as follows:

LEASE BLM-A-012245

MONTANA (State) Roosevelt (County) East Poplar (Field)

Well No. 26 C SW NE Section 23 (m. sec.) T28N (Township) R51E (Range) M.P.M. (Meridian)

The well is located 1980 ft. from {~~N~~ / ~~S~~} line and 1980 ft. from {~~E~~ / ~~W~~} line of Sec. 23

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

RECEIVED
SEP 26 1962
OIL & GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA • BILLINGS

The elevation of the derrick floor above the sea level is 2194 K.B.

READ CAREFULLY — DETAILS OF PLAN OF WORK — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

EPU #26 has been temporarily abandoned due to production depletion below economical limits. Casing will not be pulled or well plugged until further evaluation studies are made to determine possible use as pressure maintenence or S. W. disposal well. Completions have been attempted & made in the following intervals:

Perforations		Accum. Prod.	Status
5899-5908.5	(Completion)	113,775 BO, 875,407 BW	Depleted & squeezed (WO #1)
5637-5638	(WO #2)	None	Squeezed (WO #1)
5626-5631	(WO #1)	None	Squeezed (WO #1)
5625-5630	(WO #1)	None	Squeezed (WO #2)
5608-5613	(WO #2)	281 BO, 9,434 BW	Depleted & Temp. Abandoned

Casing is collapsed at 5690.

Approved subject to conditions on reverse of form

Date Sept 28, 1962

By R M Watkins
USGS 9/26/62
District Office Agent

Company Murphy Corporation

By M H Jones

Title Field Production Supt.

Address Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

OVER

Form No. 2

GENERAL RULES
201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)
TO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

This is on our 1259 database as a water-supply (WS) well - but it looks like a P&A'd Producer to me - gh

SUNDRY NOTICES AND REPORT OF WELLS

		Subsequent Report of Water Shut-off	
...is		Subsequent Report of Shooting, Acidizing, Cementing	
...Shut-off		Subsequent Report of Altering Casing	
...ecurill or Repair Well		Subsequent Report of Redrilling or Repair	
...of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment Producer	X
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

September 28, 1976

Following is a {report of work done} on land {leased} described as follows:

LEASE East Poplar Unit No. 26

MONTANA (State) Roosevelt (County) East Poplar Unit (Field)

Well No. 26 SW NE (m. sec.) Section 23, T28N (Township) R51E (Range) MPM (Meridian)

The well is located 1980 ft. from {N} line and 1980 ft. from {E} line of Sec. 23

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is 2181' G.L.

READ CAREFULLY — **DETAILS OF PLAN OF WORK** — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

This well was plugged and abandoned as follows:

A bridge plug was set at 4700' with a 10' cement plug on top. The casing was cut off at approximately 2009' and a 50 sack cement plug set at the top of the casing stub. A 100' cement plug was set at the bottom of the 9-5/8" surface casing, 50' in and 50' out. A 10' cement plug was set at the top of the surface pipe. The surface casing will be cut off 4' below ground level and a steel cap welded on top of the 9-5/8" casing. No dry hole marker is to be erected.

Surface restoration will be completed by November 1,1976.

LOCATION INSPECTED & APPROVED

Approved subject to conditions on reverse of form

Date OCT 16 1984

By Blaine Hughes
District Office Agent

Company Murphy Oil Corporation

By Billy D. Mclear

Title District Superintendent

Address P.O. Box 547, Poplar, Montana 59255

COMMISSION USE ONLY
API WELL NUMBER
25 | 085 | 05017
STATE COUNTY WELL

NOTE:—Reports on this form to be submitted to the District Agent for Approval in Quadruplicate

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL.

OVER

2

Form No. 2

GENERAL RULES
201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)
TO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment Temp.	XX
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

July 28, 19 65

Following is a {report of work done} on land {leased} described as follows:

LEASE East Poplar Unit No. 26

MONTANA (State) Roosevelt (County) East Poplar Unit (Field)

Well No. 26 SW NE Section 23 (m. sec.) 28N (Township) 51E (Range) MPM (Meridian)

The well is located 1980 ft. from {N} line and 660 ft. from {E} line of Sec. 23

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is 2181' Gr.

READ CAREFULLY — **DETAILS OF PLAN OF WORK** — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

A-3 Zone Producing 300 BWPD 291 BWPD 9 BOPD 97% water

C-3 Zone Producing 100% water

Temporarily Abandoned.

RECEIVED
JUL 30 1965
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

(LOCATION INSPECTED & APPROVED)

Approved subject to conditions on reverse of form

Date JUL 30 1965

By ORIGINAL SIGNED BY: J. R. Hug, Supervisor
District Office Agent

Company Murphy Oil Corporation
ORIGINAL SIGNED BY M. T. JAMES
By

Title Field Production Superintendent

Address P.O. Box 547 Poplar, Montana 59255

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

OVER

Form 9-881a
(Feb. 1951)

~~RETAINED DISTRICT OFFICE~~

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

RECEIVED
JUN 10 1953
OIL CONSERVATION BOARD
STATE OF MONTANA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Billings
Lease No. BLM-A-012245 X
Unit East Poplar

RECEIVED
JUN 8 1953
U.S. GEOLOGICAL SURVEY
BILLINGS, MONT.

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	XXX	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

RECEIVED
JUN 8 1953
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

June 5, 1953

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

811

C SW/4 NE/4 Sec. 23 (¼ Sec. and Sec. No.) 28N (Twp.) 51E (Range) (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the derrick floor above sea level is ..... ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

9 5/8 inch surface pipe will be set at 1000 feet and cemented with 400 sacks. The total depth is expected to be 6000 feet so as to evaluate the producing horizon found in the Madison formation. 5½ inch production string will be set at the total depth, cemented with 250 sacks. Adequate blow out preventers will be provided and inspected regularly. THIS IS NOW YOUR DRILLING PERMIT

APPROVED SUBJECT TO CONDITIONS SHOWN OR ATTACHED

(Orig. Sgd.) H. H. PENNISO
DISTRICT ENGINEER

JUN 8 - 1953
DATE

APPROVED AS OF 6/8/53

BY L. E. Clark
OIL & GAS SUPERVISOR

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana By Harold Milam

Title District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE — 16—6437-4

FEDERAL LAND

CONDITIONS OF APPROVAL

1. The lessee or operator shall mark the derrick or well in a conspicuous place with the name of the operator, well number, the land office and serial number of the lease, and location of the well and shall take all necessary precautions to preserve these markings.

2. A conductor or surface string of casing shall be run and cemented from bottom to surface unless other procedure is expressly authorized by this approval. The conductor or surface string shall be of sufficient weight and length and have installed thereon the proper and necessary high pressure fittings and equipment to keep the well under control in case an unexpected flow of gas, oil or water is encountered.

3. All showings of oil or gas are to be adequately tested for their commercial possibilities. All showings shall be properly protected by mud, cement, or casing so that each showing will be confined to its original stratum. Necessary precautions shall be taken to prevent waste or damage to other minerals drilled through and the U. S. Geological Survey, upon request, shall be furnished with carefully taken samples of such minerals as coal, potash and salt.

4. Lessee's Monthly Report of Operations (Form 9-329) shall be filed in duplicate with the office of U. S. Geological Survey, P. O. Box 400, Casper, Wyoming, not later than the sixth of the succeeding month. The report should show for this well any change of status occurring within the particular month such as date drilling commenced, suspended, resumed or completed, total depth as of the end of the month, and if shut down the reason therefor.

5. Two copies of the log of this well on Form 9-330, or other acceptable form and when available two copies of all electrical logs, directional, diameter and temperature surveys of the hole shall be filed with the district engineer within 15 days after such information is received by operator on completion of the well whichever is earlier.

6. The District Engineer, _____, shall be notified on Form 9-331a in triplicate giving thereon all necessary details of the proposed operation or test for proper consideration and action sufficiently in advance of making casing or formation tests, shooting or acidizing, running or cementing casing, other than the surface or conductor string, to permit approval of the notice prior to date of proposed work.

FEDERAL LAND

CONDITIONS OF APPROVAL

1. The lessee or operator shall mark the derrick or well in a conspicuous place with the name of the operator, well number, the land office and serial number of the lease, and location of the well and shall take all necessary precautions to preserve these markings.

2. A conductor or surface string of casing shall be run and cemented from bottom to surface unless other procedure is expressly authorized by this approval. The conductor or surface string shall be of sufficient weight and length and have installed thereon the proper and necessary high pressure fittings and equipment to keep the well under control in case an unexpected flow of gas, oil or water is encountered.

3. All showings of oil or gas are to be adequately tested for their commercial possibilities. All showings shall be properly protected by mud, cement, or casing so that each showing will be confined to its original stratum. Necessary precautions shall be taken to prevent waste or damage to other minerals drilled through and the U. S. Geological Survey, upon request, shall be furnished with carefully taken samples of such minerals as coal, potash and salt.

4. Lessee's Monthly Report of Operations (Form 9-329) shall be filed in duplicate with the office of U. S. Geological Survey, P. O. Box 400, Casper, Wyoming, not later than the sixth of the succeeding month. The report should show for this well any change of status occurring within the particular month such as date drilling commenced, suspended, resumed or completed, total depth as of the end of the month, and if shut down the reason therefor.

5. Two copies of the log of this well on Form 9-330, or other acceptable form and when available two copies of all electrical logs, directional, diameter and temperature surveys of the hole shall be filed with the district engineer within 15 days after such information is received by operator on completion of the well whichever is earlier.

6. The District Engineer, _____, shall be notified on Form 9-331a in triplicate giving thereon all necessary details of the proposed operation or test for proper consideration and action sufficiently in advance of making casing or formation tests, shooting or acidizing, running or cementing casing, other than the surface or conductor string, to permit approval of the notice prior to date of proposed work.

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Billings
Lease No. NM-A-012245
Unit East Poplar

RECEIVED
JUL 22 1953
U.S. GEOLOGICAL SURVEY
BILLINGS, MONTANA

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY X
NOTICE OF INTENTION TO ABANDON WELL	

RECEIVED
JUL 27 1953
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 15, 1953

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW/4 NE/4 Sec. 23 (¼ Sec. and Sec. No.) | 28N (Twp.) | 51E (Range) | Principal (Meridian)

East Poplar (Field) | Roosevelt (County or Subdivision) | Montana (State or Territory)

The elevation of the ~~derrick~~ ground floor above sea level is 2181 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

E.P.U. No. 26 Spudded 3:00 A.M., 7-8-53. Ran 25 joints, (1001.55'), 9 5/8 inch, 36#, J-55, 8 rd. thd., R-3, Class A Spang casing. Landed 13 feet below KB with Larkin float shoe at 1014.55'. 2 Baker centralisers at 770' and 994'. 3 BW Multi-Flex scratchers at 830', 900', and 950'. Cement with 400 sax Atlas Bulk Cement. Bumped plug with 1000 lbs. Released pressure. Held OK. Circulated clean cement to surface. Plug down at 9:00 P.M. 7-10-53.

Approved JUL 27 1953
(Orig. Sgd.) M. H. PEDDICO
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By Harold Milam

Title District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—84377-4

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office BLM-A-0122h5
Lease No. East Poplar
Unit

RECEIVED
AUG 3 1953
U. S. GEOLOGICAL SURVEY
BILLINGS, MONTANA

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	XXXX
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 29, 19 53

Well No. 26 is located 1980 ft. from {N/S} XXX line and 1980 ft. from {E/W} XXX line of sec. 23

C SW/4 Sec. 23 (T. 28) N (Range) W (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the derrick floor above sea level is 2101 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

E.P.U. No. 26. D.S.T. No. 1 with Johnston tool. 5620' to 5629', straddle packers, ½" bottom choke, no water cushion. Open tool at 5:47 P.M. for 4 hours, closed 20 minutes. Open with good blow (bottom 5 gal. bucket 4 minutes) good blow throughout test. Gas to surface 2 3/4 hours. Reversed out 1400' clean oil, 2500' salty sulphur water with good show of oil, 1407' salty sulphur water with trace of oil, chlorides 97,000 PPM. IHFP-250#, FHFP-2300#, BHSIP-2900#, Hydro. 3250#.

Approved AUG 10 1953
(Orig. Sgd.) H. H. PENNIGO
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By Harold Murphy
Title District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—8457-4

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.2
Approval expires 12-31-52

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Billings
Lease No. BLM-A-012245
Unit East Poplar

RECEIVED
AUG 6 1953
U.S. GEOLOGICAL SURVEY
BILLINGS, MONTANA

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	XXX
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

August 3, 1953

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW/4 NE/4 Sec. 23 (¼ Sec. and Sec. No.) 26 N (Twp.) 51 E (Range) Principal (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the ~~ground~~ derrick floor above sea level is 2181 ft.

Approved AUG 10 1953
(Orig. Sgd.) H. H. Pelton
District Engineer

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

E.P.U. No. 26, 5768 feet. DST No. 2 with Johnston. 5750 to 5773. Straddle packers, ½ inch bottom choke, no water cushion. Open tool at 11:20 A.M. for 2 hours. Closed 20 minutes. Tool open with fair blow (bottom 5 gal. bucket 8 minutes), increased to good blow in 10 minutes, continued rest of test. Recovered 279 feet muddy salt sulphur water with trace of oil. 651 feet salt sulphur water with trace of oil. 1570 feet salt sulphur water. Chl. 95,000 PPM. IBHFP-0, FBHFP-1200, BHSIP-2800 lbs., Hydro.-3300. Bottom packer held okay. DST No. 3 with Johnston. 5731 to 5744, ½ inch bottom choke, no water cushion. Open tool at 4:05 A.M. for 4 hours. Closed 20 minutes. Tool open with weak blow (under 3 inches water). Gas 1828 from surface. Recovered 62 feet clean oil. 93 feet muddy salt sulphur water with trace of oil. 121 feet salt sulphur water. Chl. 65,000 PPM. No flow pressure. Clock stopped. BHSIP-2600 lbs., Hydro.-3300 lbs. Going in hole with bit.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By M. H. Jarred

Title Assistant District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—6427-4

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.9.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

Land Office Billings
Lease No. NLM-A-012245
Unit East Poplar

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
AUG 7 1953
U. S. GEOLOGICAL SURVEY
BILLINGS, MONTANA

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIRING	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	XXXX
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

August 4, 1953

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW¼ NE¼ Sec. 23 (¼ Sec. and Sec. No.) 28 N (Twp.) 51 E (Range) Principal (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the ~~derrick~~ ground floor above sea level is 2161 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

E.P.U. No. 26. DST No. 4 with Johnston. 5088 feet to 5919 feet with straddle packers, ¾ inch bottom choke, no water cushion. Open tool at 1:10 P.M., 8-3-53, for 4 hours. Closed 30 minutes. Tool open with fair blow (5 inches water in 10 minutes) throughout test. Gas 4773 feet down. Recovered 837 feet oil and gas cut mud. Abundance of oil, not salty to taste. 279 feet oil and gas cut mud with salty taste. Filtrate Chloride 20,000 PPM. IBHFP-50# FBHFP-450# BHSIP-3050# Hydro. 3300#. Bottom packer leaked down to 2200#. Apparent through small fractures.

Approved AUG 10 1953
(Orig. Sgd.) H. H. PENNIES
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By M. G. Jones

Title Ass't. District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—8457-4

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Billings
Lease No. BLM-A-012245
Unit East Poplar

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
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NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	XXX
NOTICE OF INTENTION TO ABANDON WELL			

RECEIVED
AUG 11 1953
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

August 5, 1953

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW¼ NE¼ Sec. 23 (¼ Sec. and Sec. No.) 28 N (Twp.) 52 E (Range) Principal (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the ~~derrick~~ ground floor above sea level is 2181 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

E.P.U. No. 26. Ran 190 joints (5929.90') 5½ inch, 15.50#, J-55, 8 rd. thd. R-2 Class "A" Youngstown casing; landed 12.00 feet below RKB with Larkin float shoe at 5940 feet, Larkin float collar 5905.45 feet. Four Larkin centralizers at 5592', 5687', 5849, and 5928'. 120 feet Howco Roto-wall scratchers 5599'-5514'; 5620'-5635'; 5722'-5737'; 5743'-5753'; 5761'-5781'; 5879'-5899'; 5911'-5926'; 5929'-5930'. Cemented with 250 sacks, 50% Posmix, 50% Regular Ideal cement, with 2% Gel. Bumped plug with 1000#. Released pressure, held okay. Plug down 10:18 P.M., 8-4-53. Unable to rotate pipe, stuck after checking bottom. Note pipe set on Schlumberger measurement. Casing T.D., checked 5935 feet.

Approved AUG 10 1953
(Orig. Sgd.) H. H. PEARCE
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By M. L. Lamb

Title Asst. District Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—6427-4

Ref. No. 26

COPY RETAINED DISTRICT OFFICE

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Billings
Lease No. BLM-A-012245
Unit East Poplar

RECEIVED
AUG 19 1953
U. S. GEOLOGICAL SURVEY
BILLINGS, MONTANA

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	XXX
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

August 14, 19 53

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW/4 NE/4 Sec. 23 (¼ Sec. and Sec. No.) | 28N (Twp.) | 51E (Range) | Principal (Meridian)

East Poplar (Field) | Roosevelt (County or Subdivision) | Montana (State or Territory)

The elevation of the ground floor above sea level is 2181 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

PBTD. 5932 Lane Well. Drilled plug float collar at 5902 tubing measure. Drilled out cement to 5930. Tubing equals 5932 Lane Wells. Ran Gamma Ray Neutron and Collar Log. Perforated C zone 5899 to 5908.5 with 4 jet shots per foot shot on Lane Wells measure. Ran 193 joints (5884.53'), 2 3/8 inch, EUE, 4.70#, J-55, 8 rd. thd., R-2 Class A American Tubing with 3.42 perforation. Nipple bull plugged. Landed 10.10' below RKB. Top joint tubing 31.29, 192 joints tubing (5853.24). Perforated. Nipple bull plugged 3.42. Bottom of tubing5898.05. Displaced mud with water, water with oil. Open to test tank 1:00 AM to 5:00 AM. Flowed 9 barrels displacement oil. TSIP-875. Acidized C zone 5899 to 5908.5 with 1000 gallons, 15 percent Regular Dowell acid. Formation started taking acid at 1800#. Displaced 5 barrels per minute at 2000#. Bled down to 800# and open to pit at 5:56 AM. Flowed spent acid to surface 8 minutes. Fresh oil 24 minutes. Open to test tank 6:55 AM. 40 percent water. Chl. 4,5000 PPM. 8-8-53, 45 minutes test open flow, 55.50 barrels fluid, 30 percent. 1 hour test, 14/64 choke, 30.00 barrels fluid, 25 percent water. Chl. 5,800 PPM. TFP-450, CP-650. Released rig at 9:15 AM, 8-8-53.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address Box 76

Poplar, Montana

By Harold D. Milam

Title District Production Supt.

AUG 21 1953

District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—84377-4

Form 9-331 b
(April 1952)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Ft. Peck

Allottee

Lease No. BLM-A-012245

Ref. 24

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			
Notice of Intention to Squeeze Casing Leak and C-Zone	XX		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 19, 1962

Well No. 26 is located 1980ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW NE Section 23 (¼ Sec. and Sec. No.) | 28 N (Twp.) | 51 E (Range) | M.P.M. (Meridian)

East Poplar (Field) | Roosevelt (County or Subdivision) | Montana (State or Territory)

The elevation of the derrick floor above sea level is 2194 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Set C. I. cement retainer at 5660' on W. L. Squeeze casing leak and C-Zone perforations w/100 sks. cement. Perforate the A-4 5637'. Acidize w/1000 gal. through C.I. cement retaining block. Squeeze w/40 sks. Latex cement. Pressure test squeeze. Perforate the top the the A-4 Zone 5626-31'. Swab test through retrievable packer, and acidize with 500 gal., if needed.

Approved JAN 17 1962
Hillary A. Oden
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address P.O. Box 547

Poplar, Montana

By M. A. James

Title Field Production Supt.

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-8

Form 9-331a
(Feb. 1961)

R51E

U. S. GEOLOGICAL SURVEY
RECEIVED
MAR 5 1962
BILLINGS, MONTANA

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office Mont
Lease No. BLM-A-012245
Unit East Poplar

Ref 26.

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			
Notice of Intention to Test A-3 Zone X			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

February 28, 1962

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW NE Section 23 (¼ Sec. and Sec. No.) 28N (Twp.) 51E (Range) M.P.M. (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the derrick floor above sea level is 2194 ft. K.B.

DETAILS OF WORK

COPY RETAINED DISTRICT OFFICE

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Perforate 5' of A zone, acidize w/500 gallons and test.

U. S. GEOLOGICAL SURVEY
RECEIVED
MAR 6 1962
CASPER, WYOMING

Approved MAR 5 1962
Hillary A. Oden
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company MURPHY CORPORATION

Address P.O. Box 547

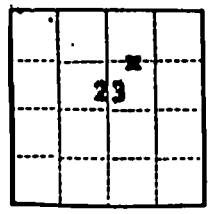
Poplar, Montana

By M. L. James

Title Field Production Superintendent

GPO 862040

Form 9-331
(Feb. 1951)



U. S. GEOLOGICAL SURVEY
RECEIVED
APR 5 1962
BILLINGS, MONTANA

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office .....
Lease No. BLM-A-012245
Unit East Poplar

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		Workover History #2	XX

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

April 3, 1962

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW NE Section 23 (¼ Sec. and Sec. No.) | 28N (Twp.) | 51E (Range) | M.P.M. (Meridian)

East Poplar (Field) | Roosevelt (County or Subdivision) | Montana (State or Territory)

The elevation of the derrick floor above sea level is 2194 ft. K.B.

RECEIVED
APR 6 - 1962
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA BILLINGS

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

See Attached Sheets

Approved APR 5 1962
(ORIG. SGD.) HILLARY A. ODEN
District Engineer

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company MURPHY CORPORATION

Address P. O. Box 347

Poplar, Montana

By ORIGINAL SIGNED BY M. T. JAMES

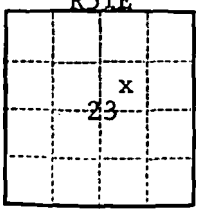
Title Field Production Superintendent

GPO 882040

Form 9-331a
(Feb. 1951)

R51E

T28N



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office .....

Lease No. BLM-A-012245

Unit East Poplar

Ref. 26

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL (Temp.)	XX		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

September 21, 1962

Well No. 26 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 23

C SW NE Section 23 (¼ Sec. and Sec. No.) T28N (Twp.) R51E (Range) M.P.M. (Meridian)

East Poplar (Field) Roosevelt (County or Subdivision) Montana (State or Territory)

The elevation of the derrick floor above sea level is 2194 ft.

COPY RETAINED DISTRICT OFFICE

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

EPU #26 has been temporarily abandoned due to production depletion below economical limits. Casing will not be pulled or well plugged until further evaluation studies are made to determine possible use as pressure maintenence or S. W. disposal well. Completions have been attempted & made in the following intervals:

Perforations		Accum. Prod.	Status
5899-5908.5	(Completion)	113,775 BO, 875,407 BW	Depleted & squeezed (WO #1)
5637-5638	(WO #1)	None	Squeezed (WO #1)
5626-5631	(WO #1)	None	Squeezed (WO #1)
5625-5630	(WO #1)	None	Squeezed (WO #2)
5608-5613	(WO #2)	281 BO, 9,434 BW	Depleted & Temp. Abandoned

Casing is collapsed at 5690.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Murphy Corporation

Address P. O. Box 547

Poplar, Montana

Approved SEP 26 1962
Willard A Olsen
District Engineer

By M. H. Jones

Title Field Production Supt.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Murphy Oil Corporation

3. ADDRESS OF OPERATOR
P.O. Box 547 Poplar, Montana 59255

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' from North line and ~~660'~~ 1980' from East line

U. S. GEOLOGICAL SURVEY
RECEIVED
JUL 30 1965
BILLINGS, MONTANA

5. LEASE DESIGNATION AND SERIAL NO.
BLM-A-012245

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Fort Peck

7. UNIT AGREEMENT NAME
East Poplar Unit

8. FARM OR LEASE NAME
East Poplar Unit

9. WELL NO.
No. 26

10. FIELD AND POOL, OR WILDCAT
East Poplar Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SW NE Section 23, T28N, R51E

12. COUNTY OR PARISH
Roosevelt

13. STATE
Montana

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
2181' Gr.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[XX]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

A-3 Zone Producing 300 BFPD 291 BWPD 9 BOPD 97% Water

C-3 Zone Producing 100% Water

Temporarily Abandoned.

18. I hereby certify that the foregoing is true and correct

SIGNED ORIGINAL SIGNED BY M. T. [illegible] TITLE Field Production Superintendent DATE July 29, 1965

(This space for Federal or State office use)

APPROVED BY (ORIG. SGD.) HILLARY A. ODEN TITLE DISTRICT ENGINEER DATE JUL 30 1965

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

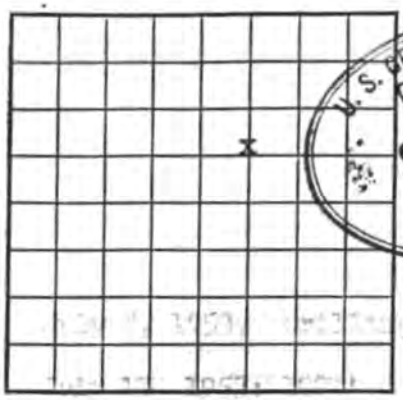
COPY RETAINED DISTRICT OFFICE

Reg. No. 26

Budget Bureau No. 42-R355.2.
Approval expires 12-31-52

Form 9-330

U. S. LAND OFFICE Billings
SERIAL NUMBER BLM-A-012245
LEASE OR PERMIT TO PROSPECT



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Murphy Corporation Address Box 76

Lessor or Tract East Poplar Unit Field State Montana

Well No. 26 Sec. 23 T. 28N R. 51E Meridian Principal County Roosevelt

Location 1980 ft. {N./S.} of N. Line and 1980 ft. {E./W.} of E. Line of Sec. 23 Elevation 2192 (Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Harold D. Murphy

Date August 18, 1953 Title District Production Supt.

The summary on this page is for the condition of the well at above date.

Commenced drilling July 8, 1953 Finished drilling August 8, 1953

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from A 5609 to 5619 No. 4, from C 5899 to 5916

No. 2, from B-1 5738 to 5744 No. 5, from to

No. 3, from B-2 5755 to 5765 No. 6, from to

IMPORTANT WATER SANDS

No. 1, from to No. 3, from to

No. 2, from to No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
9 5/8	36#	8 rd.	thd.	Spang	1001.55	Larkin			
5 1/2	15.5#	8 rd.	thd.	Youngstown	5987.90	Larkin	5809	5906	Oil string

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9 5/8	1014.55	400	Pump & Plug		
5 1/2	5940.00	250	Pump & Plug		

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set

FOLD | MARK

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 5453 feet, and from ..... feet to ..... feet

Cable tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet

DATES

Put to producing August 8, ..., 19 53

The production for the first 24 hours was 30.00 barrels of fluid of which 75 % was oil; 25 % emulsion; ..... % water; and ..... % sediment.

Gravity, °Bé. .....

If gas well, cu. ft. per 24 hours .....

Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. .....

EMPLOYEES

N. W. Strain, Driller

L. L. Rone, Driller

A. W. Hoptowit, Driller

.....

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
			SCHLUMBERGER TOPS
	2080		Niobrara
	2426		Greenhorn
	2637		Graneros
	2797		Upper Muddy
	3008		Muddy
	3053		Skull Creek
	3202		Dakota Silt
	3678		Swift
	4004		Rierdon
	4365		Piper Shale
	4442		Piper Limestone
	4498		Gypsum Springs
	4700		Spearfish
	4830		Amsden
	4940		Heath
	5111		Otter
	5256		Kibbey Sand
	5391		Kibbey Limestone
	5494		Madison

(OVER)

16—43094-2

EAST POPLAR UNIT WELL #26

Electro Log Data

Type Of Log	Interval Logged
Electrical Survey	70-5943'
Detail	2000-5943'
Microlog	2000-5940'
Radioactivity Logs:	
Gamma-Ray	4000-5920'
Neutron	4000-5930'

Tenative Tops

	Depth	Datum	Thickness
Judith River	830	+1364	
Niobrara	2080	+ 114	
Greenhorn	2426	- 232	
Graneros	2637	- 443	
Upper Muddy	2797	- 603	
Muddy	3008	- 814	
Skull Creek	3053	- 859	
Dakota Silt	3202	-1008	
Swift	3678	-1484	
Rierdon	4004	-1810	
Piper Shale	4365	-2171	
Piper Limestone	4442	-2248	
Gypsum Springs	4498	-2304	
Spearfish	4700	-2506	
Amsden	4830	-2636	
Heath	4940	-2746	
Otter	5111	-2917	
Kibbey Sand	5256	-3062	
Kibbey Limestone	5391	-3197	
Madison	5494	-3300	
A-1	5588	-3394	2
A-2	5595	-3401	5
A-3	5614	-3420	11
A-4	5625	-3431	18
B-1	5738	-3544	8
B-2	5755	-3561	15
B-3	5777	-3583	6
B-4	5810	-3616	6
B-5	5848	-3654	?
C-1	5887	-3693	?
C-2	5905	-3711	9

EAST POPLAR UNIT WELL #26

Electro Log Data

Type of Log	Interval logged
Electrical Survey	70-5943
Detail	2000-5943
Microlog	2000-5940
Radioactivity logs:	
Gamma-Ray	4000-5920
Neutron	4000-5930

Tentative Tops

Judith River	830	(+1364)
Niobrara	2080	(+ 114)
Greenhorn	2426	(- 232)
Graneros	2637	(- 443)
Upper Muddy	2797	(- 603)
Muddy	3008	(- 814)
Skull Creek	3053	(- 859)
Dakota Silt	3202	(-1108)
Swift	3678	(-1484)
Rierdon	4004	(-1810)
Piper Shale	4365	(-2171)
Piper Limestone	4442	(-2248)
Gypsum Springs	4498	(-2304)
Spearfish	4700	(-2506)
Amsden	4830	(-2636)
Heath	4940	(-2746)
Otter	5111	(-2917)
Kibbey Sd.	5256	(-3062)
Kibbey Ls.	5391	(-3117)
Madison	5494	(-3300)
"A" Zone (Micrlog)	5609	(-3415)
"B-1" Zone (Microlog)	5738	(-3544)
"B-2" Zone (Microlog)	5755	(-3561)
"C" Zone Interxlyn	5905	(-3711)

EAST POPLAR UNIT WELL #26

Core No. 1, 5615-5650, rec. 35'

C. T. 50, 50, 45, 43, 47/ 32, 33, 62, 51, 34/ 30, 33, 37, 32, 30/ 36, 31, 36, 32, 25/ 31, 31, 65, 35, 27/ 24, 29, 39, 24, 43/ 22, 13, 13, 30, 26/

5'0" Limestone, dark gray, micro to very fine crystalline, very hard, dense, except for occasional short, tight, vertical fracture in top 2', very thin, slightly porous streaks at 5617 and at 5619½' (look wet), very slight oil odor and spotty fluorescence along fracture planes, otherwise no show.

7'0" Limestone, brownish-gray, micro to very fine crystalline, medium hard, numerous short, fairly tight irregular fractures, occasional 3" streak of medium crystalline limestone with fair porosity and questionable permeability, numerous blackstylolitic partings; fair oil odor and good, even, golden-yellow fluorescence in porous zones and along fracture planes.

4'0" Limestone, brownish-gray, medium to coarsely crystalline, medium soft, very fossiliferous in top 2', good porosity and permeability; good oil odor on fresh break, even bright yellow fluorescence.

3'6" Limestone, brownish-gray, fine crystalline, medium hard, fair vuggy porosity, with numerous small pencil point vugs, numerous small white selenite inclusions, fair oil odor and spotted golden-yellow fluorescence, unit looks wet.

3'6" Limestone, dark brownish-gray, oolitic, medium soft, good porosity and permeability, faint oil odor on fresh break, spotty, bright, milky fluorescence, unit looks wet.

4'6" Anhydrite, light gray to white, fine crystalline, medium soft, numerous thin dark, argillaceous limestone partings. No Show.

5'0" Dolomite, light gray, microcrystalline, very hard, very slightly porous, questionably permeable, occasional short, tight, vertical fracture, unit looks wet. No Show.

1'0" Anhydrite, light gray to white, fine crystalline, medium soft, dense, numerous irregular dark gray, argillaceous limestone partings. No Show.

1'6" Dolomite, dark gray, amorphous to microcrystalline, very hard, dense. No Show.

EAST POPLAR UNIT WELL #26

Core No. 2, 5730-5788, rec. 58'

C. T. 31, 36, 35, 33, 21/ 24, 45, 38, 12, 10/ 11, 10, 13, 13, 17/ 17, 13, 14, 16, 15/ 15, 16, 16, 14, 13/ 15, 18, 18, 20, 20/ 16, 16, 13, 14, 14/ 40, 38, 43, 51, 23/ 28, 35, 40, 20, 11/ 12, 10, 14, 22, 28/ 46, 37, 38, 38, 39/ 36, 31, 38

2'0" Anhydrite, light gray, fine crystalline, medium hard, dense, numerous thin irregular dark gray dolomitic shale partings. No Show

1'0" Limestone, dark brownish-gray, medium crystalline, medium hard, very slight porosity, questionable permeability; good oil odor and bright golden-yellow fluorescence; trace of light green oil bleeding from an occasional vug.

0'6" Anhydrite, light gray, fine crystalline, medium hard, dense; numerous thin, irregular, black, dolomitic shale partings. No Show.

1'0" Limestone, medium gray, microcrystalline, medium hard, very slight porosity, questionable permeability, numerous very small elongated brown calcite inclusions, occasional short tight hairline fracture, faint oil odor and even bright golden-yellow fluorescence both in mass of unit and along fracture plane.

5'0" Limestone, dark brownish-gray, medium crystalline, fair porosity and permeability; occasional thin dense streak; good oil odor and even to spotted bright golden-yellow fluorescence; occasional short fairly well developed vertical fracture with good oil odor and even bright golden-yellow fluorescence.

8'6" Anhydrite, light gray, fine crystalline, medium hard, dense, numerous thin irregular black dolomitic shale partings. No Show.

5'0" Limestone, dark brownish-gray, fine crystalline, very slight porosity, questionable permeability, good oil odor and taste on fresh break, even, bright golden-yellow fluorescence, occasional small pin-point vug bleeding some light green oil.

6'0" Limestone, brownish-gray, very fine crystalline, very hard, dense to very slight porosity, occasional short, irregular, well developed fracture; faint oil odor on fresh break with even dull yellow fluorescence, good oil odor and bright golden-yellow fluorescence along fracture planes.

3'0" Limestone, dark brownish-gray, fine crystalline, pseudo oolitic, fair porosity and permeability; good oil odor and bright golden-yellow fluorescence on fresh break, occasional short, fairly well developed vertical fracture with good oil odor and bright golden yellow fluorescence along fracture plane.

EAST POPLAR UNIT WELL #26

Core No. 2 continued:

1'6" Limestone, dark gray, amorphous, very hard, brittle, mass of unit is dense; numerous short tight hairline fractures, with good oil odor and even, bright, golden-yellow fluorescence along fracture plane. No Show in mass of unit.

1'6" Limestone, dark gray, very fine crystalline, medium hard, dense, except for single well developed vertical fracture extending throughout unit, well cemented with selenite, faint oil odor and stain along fracture plane, spotted dull yellow fluorescence along fracture plane.

4'0" Limestone, dark gray, amorphous to microcrystalline, very hard, mass of unit is dense, with numerous well developed irregular fractures throughout, fairly well cementedwith selenite; occasional small pencil-point vug along fractures, faint oilodor and stain along fracture planes, spotted dull yellow fluorescence, occasional black stylolitic parting.

5'0" Dolomite, light brownish-gray, microcrystalline, very slight porosity, questionable permeability, medium soft, unit looks wet. No Show.

2'0" Anhydrite, dark gray, microcrystalline, medium soft, dense. No Show.

2'6" Dolomite, medium gray, fine crystalline, medium hard, dense, very sandy with numerous very fine, clear, quartz grains scattered throughout. No Show.

3'0" Dolomite, medium gray, amorphous, very hard, dense, occasional small 1/4" inclusion of soft white selenite. No Show.

Core No. 3, 5890-5935, rec. 43'

C. T. 20, 17, 14, 14, 12/ 13, 14, 18, 11, 11/ 10, 9, 10, 10, 9/ 9, 7, 9, 19, 15/ 13, 13, 20, 20, 18/ 20, 18, 24, 18, 20/ 20, 15, 20, 22, 23/ 18, 17, 22, 19, 23/ 22, 17, 19, 21, 22/

1'0" Limestone, light to medium gray, microcrystalline, very hard, dense, except for numerous very thin, tight hairline vertical fractures, single well developed tight vertical fracture well cementedwith calcite, some calcite crystals have a thin black residue coating. No Show.

17'0" Limestone, brownish-gray, micro to fine crystalline, medium hard, fossiliferous, very slight porosity, questionable permeability in mass of unit, very highly fractured with numerous well developed open vertical fractures, fracture planes are well flushed with mud, good oil odor and taste along fracture planes, spotted dull yellow fluorescence along fracture planes. Entire unit very highly fractured with long open smooth planed vertical fractures.

EAST POPLAR UNIT WELL #26

Core No. 3 continued:

6'0" Limestone, dark brownish-gray, micro to very fine crystalline, medium hard, dense, occasional thin, tight, vertical fracture well cemented with selenite, very fossiliferous. No Show.

19'0" Limestone, brownish-gray, fine crystalline, occasional thin streak of coarse crystalline, very hard, dense, numerous black stylolitic partings, fossiliferous. No Show.

DRILL STEM TESTS:

DST #1, 5620-5629, Johnston tool, straddle packers, 1/2" bottom choke, no water cushion, tool open 4 hours, closed 20 minutes, tool open with good blow, which lasted throughout. Gas to surface in 2 hours, 45 minutes. Reversed out 1400' clean oil, 2500' salt water, with good show of oil, 1407' salt water with trace of oil. Chlorides 97,000 ppm. IBHFP: 250# FBHFP: 2300# BHSIP: 2900# Hydro: 3250#

DST #2, 5750-5773, straddle packers, 1/2" bottom choke, no water cushion, tool open 2 hours, closed 20 minutes. Tool open with good blow. Rec. 279' muddy salt water with trace of oil, 651' salt water with trace of oil, 1570' salt water. Chlorides 95,000 ppm. IBHFP: 0# FBHFP: 1200# BHSIP: 2800# Hydro: 3300#. Note: Bottom packer held okay.

DST #3, 5731-5744, 1/2" bottom choke, no water cushion, tool open 4 hours, shut in 20 minutes. Tool open with weak blow which lasted throughout. Rec. Gas 1828' from surface, 62' clean oil, 93' muddy salt water with trace of oil, 121' salt water., Chlorides 65,000 ppm.

DST #4, 5888-5919, Johnston tool, straddle packers, 1/2" bottom choke, no water cushion. Tool open 4 hours, closed 30 minutes. Tool open with fair blow throughout. Gas 4773' down from the surface. Rec. 837' heavily oil and gas cut mud, 279' oil and gas cut mud with salty taste. Chlorides 20,000 ppm. IBHFP: 50# FBHFP: 450# BHSIP: 3050# Hydro: 3300#. Note: Bottom packer leaked down to 2200'.

EAST POPLAR UNIT WELL #26

Sample Description

2000-2040	Shale, medium gray, slightly sandy, fissile; some soft, light gray to white, slightly sandy bentonite; trace of dark to light gray, fine grained bentonitic sandstone.
2040-2080	Shale, as above, with inclusions in fine-medium grained, light gray, bentonitic sandstone.
2080	Sample Top: Niobrara.
2080-2090	Shale, as above, with trace of dark gray, fairly firm shale, with numerous light gray to tan, calcareous specks.
2090-2190	Shale, dark gray, firm, very calcareous, with numerous small light gray to tan calcareous specks; some light gray, medium firm, slightly sandy shale; some light gray, bentonitic, medium grained sandstone; trace of soft white sandy bentonite.
2190-2300	Shale, light gray, medium firm, very slightly sandy; some dark gray, speckled shale; trace of light gray, fine-medium grained bentonitic sandstone; trace of soft bluish-gray to white bentonite.
2300-2445	Shale, as above, with trace of dark brownish-gray speckled shale; trace of light gray, medium grained, bentonitic sandstone; trace of soft, light gray bentonite.
2445	Sample Top: Greenhorn.
2445-2620	Shale, light gray, firm, very calcareous, with numerous small tan specks of chalk; some medium gray, firm, slightly sandy shale; trace of light gray, dense, crystalline limestone; trace of light gray, fine-medium grained bentonitic sandstone; trace of pyrite.
2620	Sample Top: Graneros.
2620-2880	Shale, dark gray to black, fissile; medium soft, numerous small brown fossiliferous leaves (?); some light gray, slightly sandy shale; trace of pyrite; trace of white bentonite.
2880	Sample Top: Upper Muddy.
2880-2970	Shale, as above, with some light gray siltstone.
2970-3040	Shale, as above, with silt, trace of fine-medium grained, tight glauconitic sandstone.
3040	Sample Top: Muddy Sand.

3040-3090	Sandstone, light gray to white, fine to medium gray, porous, permeable, sand grains well sorted and well rounded; some dark gray, medium soft, fossiliferous shale; trace of light gray, silt; trace of pyrite, occasional fairly large chert pebbles.
3090	Sample Top: Skull Creek
3090-3200	Shale, light gray, medium hard, slightly fissile, slightly sandy; some dark gray to black, carbonaceous, fossiliferous shale; trace of pyrite; trace of light gray to white, porous sandstone.
3200	Sample Top: Dakota Silt
3200-3270	Shale, dark gray, firm, slightly splintery, very slightly micaceous; some light gray, medium soft silt; trace of light gray, fine grained, silty sandstone.
3270-3290	Sandstone, light gray to white, fine to medium grained, very porous, permeable, sub-angular, well sorted, slightly micaceous some dark gray, firm, slightly splintery, slightly micaceous; shale.
3290-3370	Shale, dark gray, firm, splintery, slightly micaceous; some light gray to white sandstone as above; trace of soft, light gray to brown silt.
3370-3390	Shale, dark gray to black, very splintery, micaceous; firm; some light to medium gray, soft silt.
3390-3400	Shale, as above, with increase in medium gray, soft silt.
3400-3430	Sandstone, light gray to white, medium grained, porous, permeable, sub-rounded, well sorted; some dark gray to black, slightly splintery, micaceous shale; trace of light to medium gray silt.
3430-3500	Shale, dark gray to black, medium firm, slightly fissile, micaceous; some light gray to white porous sandstone, as above.
3500-3570	Shale, dark gray to black, medium firm, splintery, slightly micaceous; trace of medium gray, soft silt.
3570-3630	Shale, light brownish-gray, soft, slightly waxy lustre, bentonitic; trace of medium gray, salt and pepper siltstone; trace of dark gray to black, micaceous shale.
3630-3690	Shale, dark gray to black, medium firm, splintery; some light brownish-gray, waxy shale as above; trace of light gray to white porous sandstone; trace of medium gray, salt and pepper siltstone.
3690	Sample Top: Swift.

3690-3730	Shale, dark gray to black, firm, splintery, micaceous; some light gray, very fine grained, tight, glauconitic sandstone, very calcareous.
3730-3750	Sandstone, light gray, fine grained, tight, very calcareous; slightly glauconitic, well sorted and fairly well rounded; some dark gray to black, medium firm, fissile, micaceous shale.
3750-3810	Shale, light gray, medium firm, soft, slightly waxy, bentonitic; some dark gray to black, micaceous, splintery shale; trace of pyrite; trace of aragonite.
3810-3850	Shale, dark gray to black, firm, slightly fissile, micaceous; some medium gray, sandy shale; trace of bentonite.
3850-3890	Shale, dark gray, as above, with some medium gray, very fine grained, slightly glauconitic, calcareous sandstone; trace of gray, soft silt.
3890-4005	Shale, light gray, firm, chunky, slightly calcareous; trace of dark gray to black, splintery shale; trace of aragonite.
4005	Sample Top: Rierdon.
4005-4020	Sandstone, light gray, very fine grained, well cemented, slightly calcareous, well sorted, rounded grains; some light gray, firm, chunky, calcareous shale.
4020-4050	Sandstone, light gray, fine to medium grained, slightly porous, questionably permeable, well sorted, sub-rounded, slightly calcareous; some dark gray to black splintery shale.
4050-4120	Shale, light to medium gray, firm, chunky, slightly calcareous; some medium to dark gray, slightly splintery, fissile shale; some medium gray, soft, sandy shale.
4120-4160	Shale, as above, with trace of brownish-gray, dense limestone, trace of pyrite.
4160-4190	Shale, light gray, firm, medium soft, very slightly calcareous, trace of dark gray, fissile, slightly micaceous shale.
4190-4220	Shale, as above, with some brownish-gray, medium hard, crystalline limestone.
4220-4230	Shale, medium gray, firm, slightly calcareous, slightly splintery; some light gray, soft silt.

EAST POPLAR UNIT WELL #26

Sample Description - Page 4

4230-4250	Limestone, brown, fine crystalline, medium hard, argillaceous, some light gray, slightly calcareous shale; trace of soft, light gray silt.
4250-4300	Shale, medium gray, firm, slightly calcareous, medium hard; some soft, light gray silt.
4300-4320	Shale, as above with trace of brown, fine crystalline, dense, Limestone.
4320-4360	Shale, as above, with some light gray, soft silt.
4360	Sample Top: Piper Shale.
4360-4440	Shale, medium gray, firm, splintery, slightly calcareous; some dark gray, micaceous shale; trace of light gray, soft silt; trace soft, reddish-brown, silty shale.
4440	Sample Top: Piper Limestone.
4440-4480	Limestone, brownish, very fine to microcrystalline, medium hard, dense, sandy toward base; some light to medium gray, splintery, slightly calcareous shale; trace of red to brown silty shale.
4480	Sample Top: Gypsum Springs.
4480-4563	Shale, light greenish-gray, slightly splintery, firm; some brown, dense limestone; trace of red silty shale; trace of soft white gypsum.
4563-4600	Limestone, light gray to white, amorphous to microcrystalline, medium soft; some light greenish-gray, splintery shale; trace of soft, white gypsum; trace of red silty shale.
4600-4650	Shale, light greenish-gray, splintery, medium hard, firm; some red silty shale; trace of soft white gypsum.
4650	Sample Top: Spearfish.
4650-4660	Sandstone, light red to pink, very fine grained, very anhydritic, slightly calcareous.
4660-4670	Limestone, light gray, fine crystalline, dense, medium hard; some light greenish-gray, splintery shale; some red to brown firm shale.
4620-4700	Shale, light gray, medium firm, splintery, medium soft; some red to brown silty shale; trace of light red to pink, fine grained sandstone.

4700-4740	Sandstone, red to pink, fine grained, slightly porous, questionably permeable, very anhydritic; some medium gray, firm, shale; trace of dark red to brown shale.
4740-4800	Shale, medium gray, firm, slightly waxy lustre; some red to brown shale; trace of light red to pink anhydritic sandstone.
4800-4825	Sandstone, light red to pink, fine grained, slightly porous, questionably permeable, anhydritic; some medium gray, firm, splintery shale.
4825	Sample Top: Amsden.
4825-4845	Dolomite, light gray and pink, fine crystalline, medium hard, dense; some greenish-gray, firm, shale; some red to brown shale.
4845-4860	Shale, medium gray, splintery, medium firm, medium hard; some light gray, fine crystalline, medium soft limestone; trace of dark red to brown shale.
4860-4960	Limestone, light gray, microcrystalline, fossiliferous, medium hard, dense, except for some vuggy porosity; some red, gray, green and purple, splintery shale; trace of soft, light gray to white gypsum.
4960-5000	Shale, light gray, red, green, brown, purple, medium soft, firm; some light gray and brown, dense limestone.
5000	Sample Top: Heath (?).
5000-5035	Shale, as above, with inclusions in gray shale; trace of medium coarse grained, angular sandstone.
5035-5050	Sandstone, dark red to brown, coarse grained, slightly porous, questionably permeable, fairly well sorted, angular, dark red-brown stain on all grains; some medium gray, splintery shale; some red, gray, green shale.
5050-5100	Shale, dark red to brown, firm, medium hard, slightly splintery; some light gray, medium firm, splintery shale; trace of coarse grained, red sandstone.
5100-5115	Shale, red, red to brown, gray, yellow, splintery, medium firm, medium hard, ankeritic; trace of medium to light gray, dense limestone.
5115-5125	Limestone, brownish-gray, microcrystalline, medium hard, dense, some red and gray splintery shale.

5125-5175	Shale, red, gray, green, yellow, medium hard, firm, splintery, ankeritic; trace of dense brownish-gray limestone.
5175-5220	Shale, as above, with some dense, light gray limestone and trace of soft white anhydrite.
5220-5240	Shale, red, brown, gray, green, firm, splintery; some light gray, dense limestone; trace of soft white anhdyrite.
5240	Sample Top: Kibbey Sand.
5240-5310	Sandstone, light gray to pink, fine grained, very slight porosity, poorly sorted, frosted, subrounded grains; some red, gray, brown and green shale.
5310-5320	Shale, red to brown, gray, green, firm, brittle; slightly splintered; some light red to pink, fine to coarse grained, poorly sorted, subrounded, frosted sandstone.
5370-5390	Sandstone, red to pink, fine to coarse grained, poorly sorted, frosted, subrounded, fairly porous; some red to brown, gray and green shale.
5390	Sample Top: Kibbey Limestone.
5390-5410	Limestone, light gray, medium hard, dense, very sandy with numerous fine to medium frosted grains; some gray and red to brown, brittle shale.
5410-5500	Shale, red to brown, gray, green, firm, brittle, ankeritic; some light red to pink, fine grained sandstone.
5500	Sample Top: Madison (Charles).
5500-5510	Shale, red to brown, green to gray, firm, brittle, ankeritic; some soft white anhydrite; trace of dense brownish-gray limestone.
5510-5525	Limestone, dark gray, medium hard, fine crystalline, dense; some light gray, hard, dense, fine crystalline dolomite; trace of soft white anhydrite.
5525-5550	Anhydrite, light gray, soft, with some limestone and dolomite and above.
5550-5580	Dolomite, light gray, fine crystalline, medium hard, dense; some dark brownish-gray, fine crystalline, dense limestone; trace of soft white anhydrite.

5580-5610	Limestone, brownish-gray, medium soft, slightly porous, pseudo-oolitic; some light to medium gray, fine grained dolomite; trace of soft white anhydrite.
5610-5615	Limestone, dark gray, microcrystalline, medium hard, dense, very argillaceous; some light gray, fine crystalline, dense dolomite; trace of soft white anhydrite.
5615-5650	Core No. 1, recovered 35 feet.
5650-5780	Limestone, dark gray, very fine crystalline, medium hard, dense; anhydrite, light gray to white, very fine crystalline, dense; dolomite, light brown, microcrystalline, dense, earthy, limy, porous; shale, dark gray to black.
5720-5730	Anhydrite, light gray, white, very fine crystalline, dense; Limestone, light brown, very fine crystalline, medium hard, dense; some dark gray shale.
5730-5738	Core No. 2, recovered 58 feet.
5790-5890	Limestone, dark gray, very fine crystalline, dense; anhydrite, light gray, very fine crystalline, dense; trace of dolomite, tan, amorphous, dense; some dark gray shale.
5890-5935	Core No. 3, recovered 43 feet.
	TOTAL DEPTH: 5935' Driller

DRILLING BIT RECORD

E.P.U. No. 26

Run No.	Make	Size	Type	Ser. No.	From	To
1	Hughes	12 1/4	OSC-3	HR	0	1020
2	Hughes	8 3/4	OSC-3	74825	1020	246
3	Hughes	8 3/4	OSC-1J	67220	2460	3245
4	Hughes	8 3/4	OSC-1J	59017	3245	3390
5	Hughes	8 3/4	OSC-1J	31834	3390	3592
6	Hughes	8 3/4	OSC	45874	3592	3672
7	Hughes	8 3/4	OSC	28433	3672	3860
8	Hughes	8 3/4	OSC	45316	3860	4158
9	Hughes	8 3/4	OSC	7663	4158	4449
10	Hughes	8 3/4	OSC	45320	4449	4638
11	Hughes	8 3/4	OWV	73266	4638	4890
12	Hughes	8 3/4	OWV	38002	4890	4994
13	Hughes	8 3/4	OWV	73510	4994	5073
14	Hughes	8 3/4	OWV	73516	5073	5309
15	Hughes	8 3/4	OW	70584	5309	5377
16	Hughes	8 3/4	OWV	93138	5377	5473
17	Hughes	8 3/4	OWV	93115	5473	5615
18	Hughes	7 7/8	OW	28752	5664	5735
19	Hughes	7 7/8	OW	28747	5831	5890

E.P.U. No. 26 Totco Record

Depth	Degrees
300	¼
2460	1
3230	½
3560	¼
4155	½
4419	0
4625	¼
4885	½
5073	¼
5370	½

E.P.U. No. 26 Diamond Core Bit Record

Core No.	Make	Size	Ser. No.	From	To	Footage
1	Christensen	7 7/8	M-876	5615	5650	35
2	Christensen	7 7/8	M-876	5720	5780	60
3	Christensen	7 7/8	M-876	5890	5935	45

ROCKY MOUNTAIN DISTRICT
August 17, 1953
Report by M. T. James

COMPLETION HISTORY

E.P.U. No. 26

5943'. Nippled up and tested casing with 1000#. 30 minutes. Held okay. PBTD. 5932' Lane Well. Drilled plug float collar at 5902', tubing measure. Drilled out cement to 5930', tubing equals 5932' Lane Wells. Ran gamma ray neutron and collar log. Perforated "C" zone, 5899 to 5908.50' 4 jet shots per foot on Lane Wells measure. Ran 193 joints (5884.53') 2 3/8 inch, E.U.E., 4.70#, J-55, 8 rd. thd., R-2 Class A American tubing with 3.42' perforated nipple bull plug. Landed 10.10' below RKB.

Landed below RKB	10.10'
Top joint tubing	31.29'
192 joints tubing	5853.24'
Perforated nipple bull plug	3.42'
Bottom tubing	5898.05'

Displaced mud with water, water with oil, open to test tank 1:00 A.M. to 5:00 A.M. Flowed 9 barrels displacement oil. TSIP-875#. Acidized "C" zone, 5899' to 5908.50', with 1000 gallons 15% Regular Dowell acid. Formation started taking acid at 1800#. Displaced 5 barrels per minute at 2000#. Bled down 800#, open to pit at 5:56 A.M. Flowed spent acid to surface 8 minutes. Fresh oil 24 minutes, open to test tank 6:55 A.M. 40% water, Chloride 4,500 PPM. 45 minute test, open flow. 55.50 barrels fluid, 30% water. 1 hour test 14/64 inch choke. 30.00 barrels fluid, 25% water. Chloride 5,800 PPM. TFP-450#, CP-650#. Released rig 9:15 A.M., 8-8-53. PBTD 5932'. Shut in. Test tank full. To drop from reports.

24
3
720
25
3600
1440
5040
720
150
540

ROCKY MOUNTAIN DISTRICT
September 1, 1953
Report by Frank Darden

MUD PROGRAM SUMMARY

E.P.U. NO. 26

Mud Additives Used: Aquagel 242 sacks; Baroid 10 sacks; Caustic Soda 40 cans; Driscose 5 sacks; Soda Ash 30 sacks; Tannex 101 sacks.

Total Cost:	$2848.52
Drayage:	150.60
Total Mud Cost:	$2999.12

Drilled surface hole to 1020 feet with water. Ran and cemented 1001 feet of 9 5/8 inch casing at 1014.55 feet without difficulty. Drilled out from under surface to a depth of 4300 feet with water and began converting to a caustic soda-tannex mud at that depth. Maintained a "red" mud program while drilling to a total depth of 5943 feet without any unusual mud problems. Ran and cemented 5928 feet of 5 1/2 inch casing at 5940 feet without difficulty. Mud characteristics while drilling this well were as follows:

Depth	Mud Weight, #/gal	Viscosity, sec.	Filtrate, cc.	Ph
4155'	10.0	39	14.0	8
4449'	10.2	39	9.0	11
4767'	10.4	75	9.0	11
5070'	10.4	58	11.2	11
5352'	10.5	46	13.0	11
5615'	10.8	40	13.8	11
5733'	10.5	42	17.0	11
5867'	10.5	48	9.2	11

Location: C SW NE Sec. 23-T28N-R51E
Spacing - 160 acres
Elevation: 2181' Gr. - 2194 K.B.
Spudded: 7-7-53
Completed: 8-8-53
T.D.: 5943' Schl = 5935' Drlr.
Prod. Zones: C-2 (5899-5908.5')

Schlumberger Tops

	Depth	Datum	Thickness
Judith River	830	+1364	
Greenhorn	2426	- 232	
Muddy Sd	3008	- 814	
Dakota Silt	3202	-1008	
Piper Ls	4442	-2248	
Amsden	4830	-2636	
Heath	4940	-2746	
Otter	5111	-2917	
Kibbey Sd	5256	-3062	
Kibbey Ls	5391	-3197	
Madison	5494	-3300	
A-1	**5588	-3394	2'
A-2	**5595	-3401	5'
A-3	**5614	-3420	11'
A-4	5625	-3431	18'
B-1	**5738	-3544	8'
B-2	**5755	-3561	15'
B-3	**5777	-3583	6'
B-4	**5810	-3616	6'
B-5	5848	-3654	?
C-1	**5887	-3693	?
C-2	5905	-3711	9'

**Probable prod. Zones (From DST structural position, etc.
* Shows

Drill Pipe Corrections (Made)
3850 Driller = 3862 SLM (+12')
5377 Driller = 5373 SLM (-4')

Coring Intervals:
#1 5615-5650 Rec. 35' A-3 & 4
#2 5730-5788 Rec. 58' B-1-2-3
#3 5890-5935 Rec. 43' C-1

Drill Stem Tests:
DST #1 5620-5629 A-4 Op 4 hrs SI 20 min. Reversed out 1400' cln oil, 2500' s.w. w/good show oil, 1407' s.w. w/tr oil. Chl. 97,000 ppm. IBHFP 250 FBHFP 2300 BSHIP 2900 Hydro 3250.
DST #2 5750-73 B-2 Op 2 hrs SI 20 min. Rec. 279' muddy s.w. w/tr oil, 1570' s.w. Chl 95,000 ppm. IBHFP 0#, FBHFP 1200, BHSIP 2800, Hydro 3300#.
DST #3 5731-44' B-1 Op 4 hrs SI 20 min. Rec. gas 1828' from surf, 62' cln oil, 93' muddy s.w. w/tr oil, 121' s.w. Chl 65,000 ppm.
DST #4 5888-5919' C-2 Op 4 hrs SI 30 min. Rec. 837' hvly o & g cut mud, 279' o & g cut mud w/salty taste. Chl. 20,000 ppm. IBHFP 50 FBHFP 450 BHSIP 3050 Hydro 3300.

History Subsequent to Completion:

None

WORKOVER HISTORY NO. 1

February 14, 1962

Lease & Well No. East Poplar Unit Well No. 26

Field East Poplar County Roosevelt State Montana

Well Location C SW NE Section 23, T28N, R51E

Status Prior to Present Job:

Date Completed August 8, 1953 Date Last Workover None

T.D. 5943' P.B.T.D. 5932' Producing Zone C Zone of Madison Formation

Latest Test 100 Percent Water

Justification for Workover:

Squeeze casing leak and C Zone and re-complete in the A-4 Zone.

Summary of Workover:

1-16-62 5932' PBTD. Prep to swb form and sqz. MIR to sqz C zone, 5899' to 5908.5', and collapsed csg at 5690' to re-complete in A-4 zone. Killed well w/mud and inst B.O.P. Pld tbg. Ran junkbasket and gauge on W.L. Set Model "K" cmt retainer, C.I., on W.L. Top of retainer at 5660'. Ran tbg w/Baker stinger. Disp mud w/SW.

1-17-62 5932' PBTD. Moved off rig due to cold weather. To drop fr rpt until weather breaks.

1-22-62 5932' PBTD. Rigged up plg unit. Fill csg and tbg w/SW. Attempted to press csg. Found csg and tbg communicated. Closed tbg and broke form w/10 bbls of SW at rate of 3.5 BPM at 1800#. Drop ball tstd tbg to 3000#, held ok. Pld tbg out of hole, found stinger broke off.

1-23-62 5932' PBTD. Ran 4½" Magnet on W.L. and rec stinger. Ran tbg in hole. Stung into retainer at 5660'. Press csg to 2000#, held ok. Broke form w/SW at rate of 5 BPH at 1800#. Sqzd C zone perf 5899' to 5908' w/100 sxs of retarded cmt. 17 bbls of slurry in form, started staging 2 to 5 min steges, total stage time - 40 min. Max sqz press 400#. Overflushed 1.5 bbls. Closed well in overnight.

1-24-62 5932' PBTD. Sqz #2. Press csg to 1800#, broke form w/SW at rate of 5 BPM at 1700#. Sqz w/75 sxs of retarded cmt, 10 bbls in form. Started staging 2 - 5 min. Max sqz press 500#. Overflushed 2 bbls. W.O.C. 6 hrs.

Sqz #3. Broke form w/400#. Pld stinger out of retainer at 5660'. Sptd 75 sxs retarded cmt down tbg w/5 bbls fresh wtr ahead and 5 bbls behind. Stung into retainer. Press csg to 2000#. Pmpd 10 bbls of slurry in form. Staged 5 bbls 5 to 10 min stages, total staging time - 1 hr.

Summary of Workover (continued)

Picked up and rev out ½ bbl of cmt. Shut down 30 min. Press csg to 400# w/1.5 bbls, would not hold. Washed out retainer and overflushed 2 bbls. Closed well in overnight.

1-25-62 5932' PBTD. Sqz #4. Press sqz to 400#. Shut pump down. Bled to zero. Sqzd w/25 sxs of Neet cmt w/3 sxs of mica. Followed w/50 sxs of retarded. Sptd cmt down tbg w/1 bbl of fresh wtr ahead 5 bbls behind. Pmpd 10 bbls in form. Started staging ½ bbl at 10 to 12 min stages. Press started increasing on 2nd stage. Max sqz press 3000#. 45 sxs in form. Rev out 6 bbls of cmt slurry. Press sqz tstd to 1000#, held ok. Pld tbg out of hole. W.O.C. 4 hrs. Perf w/L-W N.C.F. #II Xonejet csg gun 5637-38' - 4 shots. Ran J.B. w/gauge ring. Set Baker cast iron cmt retainer on W.L. at 5635'. Ran tbg in hole. Stung into retainer and spaced out tbg. Flwd well to pit 20 min. Flwd approx 1" stream of wtr. Closed well in overnight.

1-26-62 5654' PBTD. Swbd well to pit, switched to tst tk. Swbd at rate of 25 BPH, 600 BPD, w/c 100% w/free salt, chlorides 216,000 ppm. Fluid level 1000' from surf. Sqzd w/75 sxs 50-50 Pozmix salt sat. Broke form at 2300' at rate of 4 BPM. Pmpd 15 bbls in form. Started staging ½ bbl 2 to 4 min stages. Max sqz press 2600#, would not hold. Picked up and rev out ½ bbl of slurry. Stung into retainer. Overflushed 1.5 bbls. Closed well in overnight.

1-27-62 5654' PBTD. Sqz #6. Broke form w/2200#. Sqzd w/100 sxs 50-50 Pozmix salt sat cmt. Sptd cmt down tbg and stung into retainer. Press csg to 1500#. Pmpd 12 bbls of cmt slurry in form at rate of 3 BPM at 4000#. Slowed pmp down. Pmpd 7 bbls at rate of 1 BPM at 2400#. Started staging ½ to 1 bbl 2 to 8 min stages, would not hold. Pld out of retainer. Rev out cmt flag. Press csg. Pmpd ½ bbl thru retainer. Let set 2 hrs. Re-press csg to 800# w/½ bbl. Shut pmp down. Bled to zero. Laid down 1 jt of tbg. Well will flw back press valve in cmt retainer will not hold. Klyn salt in wtr. Moved off plg unit to service wells.

1-28-62 5654' PBTD. Wtg on plg unit.

1-29-62 5654' PBTD. Wtg on plg unit.

1-30-62 5654' PBTD. Wtg on plg unit.

1-31-62 5654' PBTD. Moved in and rigged up plg unit.

2-01-62 5654' PBTD. Sqz #7. Sqzd C zone thru A-4 perf at 5637' to 5638' w/75 sxs reg cmt blended w/25 sxs of gel mix w/crude oil. Disp SW w/oil. Sptd cmt down tbg. Press csg to 1200#. Max sqz press 4000#. Shut down pmp. Bled to 1400#. Re-press to 4000#. Bled to 1400#. Staged 8 min. Press to 3200#, held ok. Attempted to rev out 6 bbls of slurry. Cmt dehydrated in stinger. Pld out of hole and washed out tbg.

2-02-62 5654' PBTD. Ran Baker full bore pkr in hole. Set pkr 5607'. Swb tstd sqz job. Swbd at the rate of 3 BFPH, 100% SW, chlorides 200,000 ppm. Last hr swbg had free salt in sample jar. Swbd total 6 hrs.

Summary of Workover (continued)

2-03-62 5634' PBTD tbg measurement. Overnight fillup - 3600'. Swbd 1 hr. Filled tbg w/SW then rel pkr and circ oil out of csg. Reset pkr at 5611' and tst csg and BOP w/2000#, held. Press up to 5000# on tbg. Unable to pmp into form. Rel pkr and reset at 5598'. Still unable to break form. Rel tool and circ down to top of cmt retainer. Reset tool and attempted to break form w/no success. Swbd tbg 2½ hrs. Rec 200' of fluid each run during last hr. Filled tbg and press to 5700#. Form broke back to 4200# after pmpg 2 bbls wtr. Sqzd perf 5637' w/25 sxs Latex cmt. Sqzd 10 sxs cmt out in form. Max sqz press 4200#, held ok. Rev out 15 sxs cmt leaving 1' cmt on retainer. Press up to 200# and left.

2-04-62 5626' PBTD W.L. measurement. Taged cmt w/tbg 3' high at 5631'. Set pkr at 5610' and swbd tbg dry. Waited 1 hr and made dry run w/swb filled tbg and rel tool to perf. Unable to get out of tbg w/gun. Ran swb line w/sinker bars. Still unable to get out of tbg. Pld tbg out of hole. Found cmt in tail pipe and pkr. Ran collar locator and sinker bars on W.L. Found cmt at 5626'. Not enough room to shoot. Ran tbg w/4 3/4" bit. Shut down overnight.

2-05-62 5635' PBTD W.L. RU power swivel and pmp. Drld 8' of cmt. Circ hole until cln. Pld tbg out of hole. Tst sqz w/2000#, held ok. Perf A zone 5626-31' w/Wireline's Dyna jet csg gun, 4 holes per ft. Ran tbg w/Model "R" pkr and 8' tail pipe. Set pkr at 5625' and swbd tbg down to 4500'. No apparent fluid movement. Shut down due to darkness.

2-06-62 5635' PBTD. Made 4200' fluid overnight, 100' of this was oil. Swbd 8 hrs at rate of 246 BFPD, 99% wtr. Rel tool and pld tbg. Chlorides on wtr - 178,000 ppm.

2-07-62 5634' PBTD tbg measurement. Ran tbg w/Baker full bore pkr. Set tool at 5622'. Tst csg and BOP w/2000#, held ok. Sqzd A zone 5626-31' w/ 40 sxs Latex cmt. Broke form w/3200#. Sqzd 26 sxs cmt out in form. Max sqz press 4000# pmpg sqz, held. Rev out 14 sxs cmt. Washed down to 5634'. Press up to 800# and let set overnight.

2-08-62 5634' PBTD. Tstd sqz w/4000#, held ok. Perf A zone, 5625' to 5630', w/Wireline's thru tbg gun. Set pkr at 5624' and swbd. Pkr failed after 30 min. Pld tbg. Ran tbg w/Baker Model "R" pkr. Set pkr at 5624'. Swbd 1 hr rec 14 BF. Well is making fluid wtr. Shut down due to darkness.

2-09-62 5634' PBTD. Swb tstd sqz job. Swbd tbg dry and made 2 runs w/swb per hr for 3 hrs. Swbd at rate of 1 BPH, 24 BFPD, 100% SW. Acidized w/500 gals of Dowell reg 15% acid. Sptd acid on form. Press csg to 1600#. Press tbg to 2800#, bled 100# in 2 min. Press to 3500#, bled 500# in 3 min. Press to 4000#, bled 1000# in 5 min. Acid on form 35 min w/1½ bbls in press broke from 3800# to 1500#. Change to high gear on pmp truck, pmpd 3/4 bbl at 2600#. Shut down, bled to zero w/2 bbls in form. Switch to pit. Swbd acid back and made dry run w/swb. Shut down 1 hr, had 100' of fillup wtr. Closed well in overnight.

2-10-62 5634' PBTD. Overnight fillup 2500' w/5 gals oil on top. Swbd tbg dry, waited 1 hr, had 40' fillup 60% wtr. Chlorides 135,000 ppm. Shut down overnight.

Summary of Workover (continued)

2-11-62 5634' PBTD. Overnight fillup 3500' w/250' oil on top. Swbd tbg dry, waited 1 hr, had 300' fillup, 97% wtr. Chlorides 162,000 ppm. Shut down overnight.

2-12-62 5634' PBTD. 3100' of fillup, 200' was oil. Swbd 8 hrs at rate of 12 BFPD, 99% wtr. Chlorides 142,000 ppm. Rel pkr and pld tbg.

2-13-62 5634' PBTD. Prep to move off rig to re-evaluate. Set Model "K" cmt retainer on W.L. Top of retainer at 5622'. Ran tbg w/Baker stinger. Tst BOP and csg w/2000#, held ok. Acidized A zone, 5625-30', w/500 gals Dowell 15% reg acid. Spot acid down tbg. Form broke at 2300#. Inj acid at rate of 4 BPM at 2700#. 10 min bleed down 250#. Open to pit flwd small stream. Swbd spent acid and wtr. Turn to tst tk. Last 2 hrs swbd at rate of 96 BFPD, 99% wtr. Shut in overnight. TO DROP FROM REPORT.

Recap of Workover:

1.	Final Perforations:	5625-5630' (A zone)
2.	Final PBTD:	5634'
3.	Initial Potential after Workover:	None
4.	Geological name of Producing Zone:	None
5.	Downhole Equipment:	Model "K" cmt retainer 5622' of 2 3/8" tbg

WORKOVER HISTORY NO. 2

March 26, 1962

Lease & Well No. East Poplar Unit Well No. 26

Field East Poplar County Roosevelt State Montana

Well Location C SW NE Section 23, T28N, R51E

Status Prior to Present Job:

Date Completed August 8, 1953 Date Last Workover February 14, 1962

T.D. 5943' P.B.T.D. 5634' Producing Zone A-4 Zone of Madison Formation

Latest Test Shut-In - Swabbed 96 BFPD, 99% water

Justification for Workover:

To test the A-3 zone.

Summary of Workover:

3-15-62 5634' PBTD. MI and RU plg unit. Press csg to 1500#. Broke form w/ 1100#. Sqzd w/40 sxs of Latex cemt w/HR-4 added. Sptd cmt down tbg. Stung into retainer at 5622'. Press csg to 1500#. Max sqz press 3700# w/30 sxs in form. Rel to pmp truck, bled .5 bbls. Re-presse to 3700# w/.5 bbls. Rev out 10 sxs of cmt. Pld tbg out of hole. (A-4 zone BHP after shut in approx 2 weeks at datum - 3600' 2809 psi which is normal A zone BHP.)

3-16-62 5620' PBTD. Tstd sqz job to 1500#, held ok. Perf A-3 zone 5608' to 5613' w/Lane-Wells N.C.F. II csg gun, 4 shots per ft. Ran Baker Model "R" pkr on tbg. Set pkr at 5604' swb down. First hr swbd at rate of 4 BPH, 96 BFPD (67 BWPD 29 BOPD) w/c 70%, chlorides 182,000 ppm. Second hr 2.28 BPH, 55 BFPD (49 BWPD 6 BOPD) w/c 90%. Acidized w/500 gals of Dowell 15% reg acid. Sptd acid down tbg. Press csg to 1500#. Press tbg to 2000#. Shut down pmp, bled to 400#. Resume pmpg at rate of 1/4 BPH. Press inc to 2600#, broke to 1000# w/2 bbls in form. Disp acid at rate of .5 BPM. Press dec to 1500# w/all acid in form. Open well to pit. Flwd acid to surf in 41 min. Flwd SW in 55 min. Switch to tst tk. Flwd 1 hr on 3/4" chk at rate of 20 BPH, 480 BFPD (471 BWPD 9 BOPD) w/c 98%, chloride 180,000 ppm. Switch to flw line. Flwd to tk bat overnight on 7/64 chk.

3-17-62 5620' PBTD. Swbd displacement of tbg to pit. Switched to tst tk. Swbd 1 hr at rate of 33 BPH, 792 BFPD (752 BWPD 40 BOPD) w/c 95%, chlorides 181,000 ppm. Switched to tk bat on 16/64 chk to flw tst. Rig down plg unit.

3-18-62 5620' PBTD. No test.

3-19-62 5620' PBTD. Flwg in tst tk at #26, too weak to flw to bat. Flw rate 26/64" chk, open flw, 134 BFPD, 96% w/c (5 BO 129 BW).

Summary of Workover: continued

3-20-62 5620' PBTD. 25/64" chk 16 hr tst flwd at rate of 135 BFPD, 96% wtr (6 BO 129 BW). Flwg in tst on location. Chlorides of wtr 162,000 ppm.

3-21-62 5620' PBTD. Attempting to flw to tk bat. Tst and pit full SW. 95-96% w/c.

3-22-62 5620' PBTD. 26/64" chk, TFP 20#, 188 BFPD, 97% w/c (5 BO 182 BW).

3-23-62 5620' PBTD. Flwg open flw. 4 hr tst flwd to tk bat at rate 293 BFPD, 96% w/c (12 BO 281 BW).

3-24-62 5620' PBTD. Flwg to tk bat open flw. 24 hr tst 334 BFPD, 96% w/c, (13 BO 321 BW). A-3 zone initial potential, to drop from report.

Recap of Workover:

1. Final Perforations: A-3 Zone 5608'-5613'

2. Final PBTD: 5620'

3. Initial Potential after Workover: Flwg 334 BFPD, 96% w/c (13 BOPD 321 BWPD)

4. Geological name of Producing Zone: A-3 Zone of Madison Formation

5. Downhole Equipment: 1 Baker Model "R" Packer set @ 5604'

Tubing Record

183 Jts	5586'
3 Subs	18'
	5604'

PRINTED IN U.S.A.
103 3-25 15M 2-53

FILE #26

STAGE NO.

DOWELL INCORPORATED

TREATMENT NO.

TREATMENT REPORT

DISTRICT #2 STATION Williston N. Dak DATE 8-8 , 19 53

OWNER Murphy Corp LEASE EPG 1 WELL NO. 26
POOL East Poplar COUNTY Roosevelt STATE Montana
LOCATION SEC OWNER'S REPRESENTATIVE James

WELL DATA

FORMATION "C" Zone
PAY-FROM 5899 TO 5908.5
PRESENT TOTAL DEPTH 5940 P. B. FROM 5942

PIPE DATA—
CASING SIZE 5½" WT. 15#
CASING DEPTH 5940 SKS. CEMENT 250
LINER SIZE — WT. —
LINER DEPTH-FROM — TO —
LINER DESCRIPTION —
TUBING SIZE 2" EUE DEPTH 5898
PACKER-TYPE — DEPTH —
PACKER FURNISHED BY OPERATOR — DOWELL

COMPLETION DATA—
DATE New CABLE TOOL —
ROTARY Yes DRILLING FLUID Mud
SIZE OPEN HOLE —

PERFORATING DATA OR PAY ZONES

SHOTS/FT.	FROM	TO
4	5899	5908.5

PRODUCTION—

	OIL	WATER	G. O. R.
INITIAL			
PRESENT			

ACIDIZING, SHOOTING AND LOGGING RECORD—

DETAILED RECORD OF TREATMENT

TIME A.M. OR P.M.	PRESSURE CASING	PRESSURE TUBING	REMARKS
9:05	500	500	ARRIVAL AT LOCATION WITH 1000 GALS. OF DOWELL XFW
11:05	0	800	START CIRCULATING DOWN Tbg. TO DISPLACE WATER WITH OIL
12:00	0	200	WELL CIRCULATED SHUTDOWN LET WELL FLOW

FILL 147 BBLS.
BLEED 23 BBLS.
FLUSH 23 BBLS.

BBLS. OF ACID

TIME			OUT OF TANKS	IN FORMATION	PER READING	PER MINUTE	
5:24	1000	600	0	0	0	0	START BLEEDING ACID TO FORMATION
5:24	1100	800	22	0	0	0	ACID SPOTTED ON FORMATION
:25	1500	1900	24	1	1	1.0	START 23 bbl OIL FLUSH
:26	1400	1500	29	6	5	5.0	RATE FROM 1200 TO 1500#
:27	1200	1500	24	11	5	5.0	PUMPING STEADY
:28	1200	1400	29	16	5	5.0	
:35	1200	1400	44	21	5	5.0	
:40	1200	1400	47	24	3	3.0	ALL ACID DISPLACED. SHUTDOWN
42	1000	1100					BLEED DOWN PRESSURE

LEFT LOCATION

IF TREATMENT IS NOT CONVENTIONAL LIMESTONE FORMATION TREATMENT TO INCREASE OIL OR GAS PRODUCTION, STATE PURPOSE OF TREATMENT.

R. Owen
SERVICE ENGINEER

DISTRICT OFFICE COPY.

STATION OR DISTRICT MANAGER

TREATMENT REPORT · DWL-494-C PRINTED IN U.S.A.

TREATMENT NO. 15-2-2400

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

STAGE NO. 1

TYPE OF TREATMENT	DISTRICT	STATION	DATE
Acidizing	Denver #15	02 Glendive	3-16-62

OWNER	WELL NAME AND NUMBER	POOL
Murphy Corporation	EPU #26	East Poplar

COUNTY	STATE	LOCATION	OWNER'S REPRESENTATIVE
Roosevelt	Montana	23-28N-51E	Mr Shumaker

1 TYPE OF WELL: [X] A. OIL [ ] B. WATER [ ] C. GAS [ ] D. WATER INJ. [ ] E. WASTE DISP. [ ] F. OTHER

2 FORMATION: A-3 Zone

3 TOTAL DEPTH	4 BOTTOM HOLE TEMP.	5 SACKS CEMENT
TD 5620		

6 TYPE OF COMPLETION: [ ] A. NEW WELL [ ] B. REWORK [ ] C. RECOMPLETION

7 DRILL FLUID USED: [ ] A. WATER BASE [ ] B. OIL BASE [ ] C. AIR OR GAS [ ] D. OTHER

8 INITIAL PRODUCTION			9 PRESENT PRODUCTION		
WATER (BPD)	OIL (BPD)	GAS (MCF/D)	WATER (BPD)	OIL (BPD)	GAS (MCF/D)

10 CASING SIZE & DEPTH	11 TYPE OF CASING	12 CASING VOLUME	13 ALLOWABLE CSG. PRESS	14 LINER FROM TO	15 SIZE
5½	[ ] A. N-80 [ ] C. H-40 [ ] E. LAPWELD [X] B. J-55 [ ] D. P-110 [ ] F. OTHER				

16 TUBING SIZE	17 DEPTH OF TUBING	18 TUBING VOLUME	19 ALLOWABLE TBG. PRESS.	20 NAME OF PACKER	21 PACKER DEPTH
2" EUE	5610 [ ] PERF. [ ] O.E. [ ] BULLPLUG	22		Baker "R"	5604

22 O.H. OR PERF.

O.H. SIZE	SHOTS/FT	FROM	TO	CHECK ZONE TREATED	O.H. SIZE	SHOTS/FT	FROM	TO	CHECK ZONE TREATED
		5608	5613	—					

TREATING MATERIALS	
TYPE	AMOUNT
Dowell XFW	500 Gals

23 PREVIOUS TREATMENT RECORD (SHOW DATES)

24 PUMPING EQUIPMENT	25 POUNDS SAND PER GAL. MAX. MIN. AVG.	26 JOB DONE DOWN [X] A. TBG [ ] ANNULUS [ ] B. CSG.	27 AVERAGE RATE TREATING FLUID
TD Pump			4 BPM

FILL AND BREAKDOWN	28 TOTAL BBLS. PUMPED	29 TREATING FLUID	30 FLUSH	31 MAXIMUM TREATING PRESS.	PSI AT	BPM
	34	Acid 12	Salt Water 22	3800	25	

32 MINIMUM TREATING PRESS.	PSI AT	BPM	33 SHUT IN PRESSURE IMMEDIATELY AFTER JOB	34 SHUT IN PRESSURE AT MINUTES LATER
150	6			

TIME A.M. OR (P.M.)	PRESSURE CASING	PRESSURE TUBING	BARRELS OF FLUID OUT OF TANKS	PER READING	IN FORMATION	PER MINUTE	REMARKS
							ARRIVED AT LOCATION 930 (A.M.) P.M.
1.50							Start Req. Acid Down Tubing
2.54		0	12				12 BBLs Acid in Tubing Start Salt Water Flush
2.56		250	20				20 BBLs in Tubing when Tubing Filled
							Stop Pump
2.58	1600						Pressure Annulus to 1600#
3.00	1600	350					Start Disp. Treatment of Fluid in Tubing Ahead of Acid
3.02	1600	2000					Stop Pump Pressure Bleeding off when Pump Stopped
3.03		1500					Resume Pumping Slow
3.07		2500					Pressure Leveled off
3.09		2550	22				Acid over Perforations, Start Disp. Treatment
3.13		2350	23	1	1	.25	1 BBL Acid in Formation
3.15		2550					Stop Pump to Soak
3.16	1500	1500					Resume Pumping
3.18		2800	24	1	2	.25	Pressure Broke At 2800#
3.21		1000	25	1	3	.33	
3.25	1500	750	27	2	5	.5	Slow Pump Down
3.31	1100	250	30	3	8	.5	
3.39	900	150	34	4	12	.6	12 BBLs Req. Acid in Formation, Flush Complete
							Stop Pump Job Complete
							Turn Well To Pit
							TIME LEFT LOCATION 4:30 (A.M.) P.M.

ENGINEER L. F. Wilson

Halliburton COMPANY

CEMENTING SERVICE TICKET

No. CS 825329

DATE	CUSTOMER'S ORDER NO.	CUSTOMER'S REQ. NO.	SEC.	TWP.	Range	TRUCK CALLED OUT	ON LOCATION	JOB BEGAN	JOB COMPLETED
5-15-62			23	28	51	4AM DATE A.M. P.M.	8AM DATE A.M. P.M.	10AM DATE A.M. P.M.	11:30AM DATE A.M. P.M.

WELL NO. AND FARM	PLACE OR DESTINATION	COUNTY	STATE
FU #26	E. Poplar	Roosevelt	Montana

TYPE OF WELL: 1 ☐ WORKOVER 2 ☐ EXPLORATORY 3 ☐ DEVELOPMENT 4 ☐ OTHER

OWNER: Murphy Corp.

CONTRACTOR: Western Oil Field Svc.

CUSTOMER ONLY

CUS. INV. REQ. ORIG. & ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ OTHER — No. Copies

CHARGE TO: Murphy Corp.

MAILING ADDRESS: Murphy Bldg.

CITY AND STATE: El Dorado, Ark.

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA:

TYPE OF JOB (/) ONE		CASING		HOLE DATA		TUBING OR DRILL PIPE		CEMENTING PACKER	
SURFACE		NEW		BORE SIZE		SIZE	2"	SIZE	5½"
INTERMEDIATE		USED							
PRODUCTION		SIZE	5½"	TOTAL DEPTH		TYPE	IUE	TYPE	Baker Mod. K
SQUEEZE	X	WEIGHT	15.5	ROTARY		WEIGHT	4.75	WEIGHT	15.5
PUMPING		DEPTH							
PLUG BACK		TYPE		CABLE TOOL		TOTAL DEPTH	5622'	DEPTH SET	5622'
GROUTING									
OTHER (write in)									

MAKE FLOAT EQUIPMENT	
FLOAT COLLAR	
GUIDE SHOE	
FLOAT SHOE	
OTHER EQUIPMENT	

SQUEEZE OR PLUG BACK DATA

PURPOSE		Depth From	TO APPROX.	IN SIZE CASING	IN SIZE HOLE
WATER	X	5625'	5630'	5½"	
GAS					
Abandon					

CEMENT DATA — BULK? ____ SACKED? X — MIXED WT. PER GAL. 15#

SACKS	TYPE	BRAND	% GEL.	OTHER ADMIX
40	Reg.	Dacotah		

OTHER DATA ON SERVICE OPERATION

PLUGS AND HEADS		PRESSURE	
BOTTOM PLUG	TYPE	CIRCULATING	
TOP PLUG	TYPE	MINIMUM	
TYPE HEAD		MAXIMUM	2500

CEMENT LEFT IN CASING _____ FT.

☐ BY REQUEST ☐ NECESSITY MEASURED WITH LINE?

The following information is urgently requested in order that we may be fully advised, and to enable us to keep our standard of service up to the highest point.

WAS OPERATION OF THE CEMENTING EQUIPMENT SATISFACTORY? ____ WAS THE WORK OF THE CREW PERFORMED IN A SATISFACTORY MANNER? ____

WAS CEMENTING JOB SATISFACTORILY COMPLETED? ____ SUGGESTIONS: ____

R. R. Shumake

OWNER, OPERATOR OR HIS AGENT

TRUCK NO. & TYPE	TRUCK LOCATION	TITLE	NAME
454 DT-10	Glendive Montana	Cementer	Cullickson
		Driver	Brown
		Cementer	
		Driver	
		Cementer	
		Driver	
		Cementer	
		Driver	

INVOICE SECTION

DEPTH OF JOB ____ FT.

PRICE REF.	SERVICE AND RENTAL CHARGES	AMOUNT
	BASE CHARGE FT.	
	FT. Per Ft. FT. per 100' or Fraction	
	EXTRA TRUCK	
	STAND BY TRUCK	
	MILEAGE @	

TERMS $ NET If paid by 20th. of following month. 6% SUB-Interest charged after 60 days from date TOTAL of invoice.

$ _____ TAX ADJUSTMENT MAY BE DEDUCTED IF DISCOUNTED

This is to certify that the Fair Labor Standards Act of 1938, as amended, has been complied with in the production of goods and/or with respect to the services furnished covered by this invoice.

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TAX

TOTAL

COPY

Halliburton COMPANY

FORM #

CEMENTING SERVICE TICKET

No. 08 825288

DATE	CUSTOMER'S ORDER NO.	CUSTOMER'S REQ. NO.	SEC.	TWP.	Range	TRUCK CALLED OUT	ON LOCATION	JOB BEGAN	JOB COMPLETED
1-17-62			23	28N	51E	4AM DATE A. M. P. M.	8AM DATE A. M. P. M.	DATE A. M. P. M.	DATE A. M. P. M.

WELL NO. AND FARM	PLACE OR DESTINATION	COUNTY	STATE
BPU #26	E. Poplar	Roosevelt	Montana

TYPE OF WELL: 1 ☐ WORKOVER 2 ☐ EXPLORATORY 3 ☐ DEVELOPMENT 4 ☐ OTHER

OWNER: Murphy Corp.

CONTRACTOR: Western Oil Field Svc.

DUNCAN USE ONLY

CUS. INV. REQ. ORIG. & ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ OTHER No. Copies

CHARGE TO: Murphy Corp.

MAILING ADDRESS: Murphy Bldg.

CITY AND STATE: El Dorado, Ark.

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA:

TYPE OF JOB (/) ONE	CASING	HOLE DATA	TUBING OR DRILL PIPE	CEMENTING PACKER
SURFACE	NEW	BORE SIZE	SIZE	SIZE
INTERMEDIATE	USED			
PRODUCTION	SIZE	TOTAL DEPTH	TYPE	TYPE
SQUEEZE X				
PUMPING	WEIGHT	ROTARY	WEIGHT	WEIGHT
PLUG BACK	DEPTH			
GROUTING	TYPE	CABLE TOOL	TOTAL DEPTH	DEPTH SET
OTHER (write in) Mileage Chg. ONLY				

MAKE FLOAT EQUIPMENT
FLOAT COLLAR
GUIDE SHOE
FLOAT SHOE
OTHER EQUIPMENT

SQUEEZE OR PLUG BACK DATA — CEMENT DATA

PURPOSE	Depth From	TO APPROX.	IN SIZE CASING	IN SIZE HOLE	BULK? SACKS	SACKED? TYPE	MIXED WT. PER GAL. BRAND	% GEL. OTHER ADMI
WATER								
GAS								
Abandon								

OTHER DATA ON SERVICE OPERATION

PLUGS AND HEADS		PRESSURE
BOTTOM PLUG	TYPE	CIRCULATING
TOP PLUG	TYPE	MINIMUM
TYPE HEAD		MAXIMUM

CEMENT LEFT IN CASING _____ FT.

☐ BY REQUEST ☐ NECESSITY MEASURED WITH LINE?

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WAS OPERATION OF THE CEMENTING EQUIPMENT SATISFACTORY? _____ WAS THE WORK OF THE CREW PERFORMED IN A SATISFACTORY MANNER? _____

WAS CEMENTING JOB SATISFACTORILY COMPLETED? _____ SUGGESTIONS: _____

R. R. Shumake

OWNER, OPERATOR OR HIS AGENT

TRUCK NO. & TYPE	TRUCK LOCATION	TITLE	NAME
5454 DT-10	Glendive Montana	Cementer	Cullickson
		Driver	Brown
		Cementer	
		Driver	
		Cementer	
		Driver	
		Cementer	
		Driver	

INVOICE SECTION

DEPTH OF JOB _____ FT.

PRICE REF.	SERVICE AND RENTAL CHARGES	AMOUNT
	BASE CHARGE FT.	
	FT. Per Ft. FT. per 100' or Fraction	
	EXTRA TRUCK	
	STAND BY TRUCK	
	MILEAGE @	

TERMS $ NET If paid by 20th. of following month. 6% SUB-Interest charged after 60 days from date of Invoice. TOTAL

$ _____ TAX ADJUSTMENT MAY BE DEDUCTED IF DISCOUNTED

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TAX

TOTAL

COPY

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WELL REPORT

WISCO Wire Line Well Service

5062

P. O. Box 205
WILLISTON, NO. DAKOTA

COMPANY [illegible]
ADDRESS
COMPANY REPRESENTATIVE
OPERATIONS

FIELD EP 21
WELL [illegible]
WELL PRESSURE [illegible]
WELL DEPTH
CUSTOMER'S ORDER NO.

EQUIPMENT USED

POWER UNIT [illegible]
CREW [illegible]

DAILY REPORT

DATE	OPERATION	NO. HOURS	AMOUNT
9-14-76	[illegible]		400
	[illegible]	6	360
	[illegible]		84
	[illegible]		100
	[illegible]		30
	Perfd 65 ft @ 50 [illegible]		

Remarks

TOTAL SERVICE AND MATERIAL

ACCEPTED [illegible]
(Name of Company)

BY

WISCO WIRELINE WELL SERVICE

BY [illegible]

INVOICE NO.	DATE	AMOUNT

WELL REPORT

WISCO Wire Line Well Service

5061

P. O. Box 205
WILLISTON, NO. DAKOTA

COMPANY
ADDRESS
COMPANY REPRESENTATIVE
OPERATIONS

FIELD
WELL
WELL PRESSURE
WELL DEPTH
CUSTOMER'S ORDER NO.

EQUIPMENT USED

POWER UNIT
CREW

DAILY REPORT

DATE	OPERATION	NO. HOURS	AMOUNT
7-9-76			
		12	720
		3	17
			30
7-11-76			
	-776-		210
		11	660
			110
			54
7-12-76			400
			250
			400
		1	60
			54
			108

Remarks

TOTAL SERVICE AND MATERIAL

ACCEPTED
(Name of Company)

BY

WISCO WIRELINE WELL SERVICE

BY

INVOICE NO.	DATE	AMOUNT

Other Method of Shutting off Water.....

Pump.....Tubing.....

Sucker Rods.....Feet of Anchor.....

Gas: I. P. per 24 hrs.....cu. ft. Rock Pressure.....lbs. sq. in.

Date Connected to Line.....Line Pressure at Well.....lbs.

REMARKS

(Give additional details of drilling, and, if hole is dry or abandoned) final condition of hole.)

Spud 4/5/43 Comp 7/1/43

1015' 9⅝" C/M 400 sx Circ.

5½" @ 5940 cm 250 sx.

Test

F P.

T.D. 5943 Comp. 8/6/43

Flowed 30 Fluid 23% Nat. per hr. thru 16/64 ch.

Log of Well

Depth.....feet

State.....County.....

TR.MK. REG. U.S. PAT. OFF.

Section.....T.....R.....

Operator.....Well No.....

Lessor.....Acres.....

Location.....

Elevation.....Total Depth.....
(relative to sea level)

Type of Rig.....

Method of Drilling.....

Drilling Commenced.....Completed.....

Drilling Contractor.....Deepened.....

Kind of Fuel Used.....No. Days.....Amount.....

No. Days Water Used.....Furnished By.....

CASING RECORD						SHOE	
Length	Size	Wt. per Foot	Landed at	Make	Pulled	Length	Make

PACKERS

Date	Size	Set at	Make	How Tested, Result

TORPEDO RECORD

Date	Put in By	Quarts	Ft. of Shell	Size	Shot Between ft.	Shot Between ft.

Commenced Producing.....I. P. per 24 hrs.....bbls.

Average daily production after.....days.....bbls. After shot.....bbls. *(Pumped or flowed)*

After 3 mos.....bbls.; 6 mos.....bbls.; 1 year.....bbls.

Gravity.....°Bé. Color.....Water cut.....% water

△Producer ⊙Drilling ✱Gasser ⊠Dry ⊕Abandoned

IRELINE SERVICE
ASING PULLING SERVICE
ANUFACTURERS REPRESENTATIVES
YDRAULIC POWER TONGS & CREWS
OUSTABOUT CREWS
SED OIL FIELD EQUIPMENT

WISCO
WILLISTON INDUSTRIAL SUPPLY CORP.

Phone 572-2135
Area Code 701
P. O. Box 1323
WILLISTON, N. DAK. 58801

No. 1473-76

SOLD TO: Murphy Oil Corp.
Box 547
Poplar, Montana 59255

LOCATION: East Poplar Unit #26
Roosevelt County, Mont.

TERMS:
ORDER NO.
F. O. B.
INVOICE DATE 9/17/76

	DESCRIPTION	UNIT PRICE	TOTAL
/9/76	Rigged up on EPU #26, cleaned out cellar, stripped head, welded nipple on, rigged up jacks, got off slips, worked pipe----------12 hours	60.00	720.00
	Crew travel---------- 2 hours	28.00	84.00
	Pickup		30.00
/10/76	Worked pipe, shot pipe at 2996'		350.00
	Tried to circulate casing----------11 hours		660.00
	4th man----------11 hours	10.00	110.00
	crew travel		84.00
/13/76	Pumped plug at 3000'		400.00
	Shot pipe at 1992' and worked pipe		350.00
	Pumped plug on stub		400.00
	Rig time----------10 hours		600.00
	Crew travel----------3 hours		84.00
	4th man----------10 hours		100.00
	Pickup		30.00
/14/76	Pumped plug on bottom surface		400.00
	Rigged down, moved to 74----------6 hours		360.00

-CONTINUED-

WIRELINE SERVICE
CASING PULLING SERVICE
MANUFACTURERS REPRESENTATIVES
HYDRAULIC POWER TONGS & CREWS
ROUSTABOUT CREWS
USED OIL FIELD EQUIPMENT

WISCO
WILLISTON INDUSTRIAL SUPPLY CORP.

Phone 572-2135
Area Code 701
P. O. Box 1323
WILLISTON, N. DAK.-58801

No. 1475-76
continued

SOLD TO: Murphy Oil Corp.
Box 547
Poplar, Mont 59255

LOCATION: East Poplar Unit #26
Roosevelt County, Mont.

TERMS:
ORDER NO.
F. O. B.
INVOICE DATE 9/17/76

	DESCRIPTION	UNIT PRICE	TOTAL
9/14/76	Crew travel----------3 hours		84.00
	4th man----------10 hours		100.00
	Pickup		30.00
	Pulled 65 joints of 5½" pipe, 2008.75'	.50	1004.38
			$ 5858.38
	WISCO MT 5061, 5062		
	Casing Pulling: Montana		

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instruct. on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

U. S. Geological Survey
RECEIVED
AUG 26 1976
Billings, Montana

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Murphy Oil Corporation

3. ADDRESS OF OPERATOR
P.O. Box 547, Poplar, Montana 59255

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' from the North line and 1980' from the East line

5. LEASE DESIGNATION AND SERIAL NO.
BLM-A-012245

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Assiniboine Souix

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
East Poplar Unit

9. WELL NO.
No. 26

10. FIELD AND POOL, OR WILDCAT
East Poplar Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SW NE Section 23, T28N, R51E

12. COUNTY OR PARISH
Roosevelt

13. STATE
Montana

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
2181' G.L.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[X]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

It is proposed to plug and abandon this well as follows:

Set a bridge plug with wireline at 4700' with a 10' cement plug on top.

Cut 5-1/2" casing off at approximately 3600' and set a 50 sack cement plug at top of casing stub.

Set a 100' cement plug at the top of the Dakota Sand, 3202'.

Set a 100' cement plug (50' in and 50' out) at bottom of 9-5/8" surface casing.

Set a 10' cement plug at top of surface casing. The surface casing will be cut off 4' below ground level and a steel cap welded on top of the 9-5/8" casing.

No dry hole marker is to be erected.

18. I hereby certify that the foregoing is true and correct

SIGNED ORIGINAL SIGNED BY BILLY G. MELEAR TITLE District Superintendent DATE August 24, 1976

(This space for Federal or State office use)

APPROVED BY Joseph H. Pavlik TITLE DISTRICT ENGINEER DATE 9-3-76

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

CONDITIONS OF APPROVAL FOR WELL ABANDONMENT

Company MURPHY OIL CORP Location SW NE 23-28N-51E

Well No. 26 Lease No. BLM-A-012245

A COPY OF THESE CONDITIONS SHOULD BE FURNISHED YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

1. This office should be notified sufficiently in advance of actual plugging work so that a representative may have an opportunity to witness the operation.

2. Upon completion of approved plugging, erect the regulation marker in accordance with 30 CFR 221.22 and clean up the location. The marker should not be less than 4 inches in diameter and extend approximately 4 feet above general ground level. Heap up the dirt around the base of the marker about 18 inches to take care of any settling of the cellar. The top of the marker must be closed or capped. Pits must be fenced unless approved otherwise by the district engineer.

3. The following minimum information shall be permanently placed on the marker with a plate, cap, or beaded-on with a welding torch:

   "Fed" or "Ind" as applicable.
   "Well number, location by ¼¼ section, township and range."

4. Within 15 days after well bore plugging operations are completed, form 9-331 (Subsequent Report of Abandonment) must be filed showing location of plugs, amount of cement in each, amount of casing left in hole, and status of surface restoration. If a temporary delay in removal of equipment or surface cleanup is deemed necessary and acceptable to this office, so note on this report and notify this office when such work has been completed to your satisfaction. This final abandonment report will not be approved until a physical inspection by this office and the surface management agency finds the well site in satisfactory condition.

5. If not previously filed, submit in duplicate Well Completion or Recompletion Report and Log (form 9-330), well history, electric logs, and other surveys, and if taken, core analysis and water analysis. These reports must also be filed within 15 days after completion of plugging operations.

6. You or your authorized representative should inspect the abandoned location prior to notification to this office by form 9-331 that it is ready for inspection, and note especially:

   (a) That the regulation dry-hole marker bears the correct legend as required in item 3.

   (b) That rathole and mousehole are filled, not just bridged, and pits are filled and leveled.

   (c) That all material and junk are gone. This includes deadmen protruding above the level ground surface.

   (d) That reseeding or other required restoration work has been completed.

7. The U. S. Geological Survey district office address is:

   Conservation Division, P. O. Box 2550, Billings, MT 59103

   Phone 245-6711 Ext 6367

   Dist. Engr. Virgil L Pauli Home Phone 656-2244

   Asst. Engr. _____ Home Phone _____

8. The BLM contact man is: _____

   Phone _____ (home)

   Phone _____ (office)

ENVIRONMENTAL PROTECTION AGENCY

REF. 26

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

NOV 5 1998

MONTANA OFFICE
Geological Survey

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0256-4047
BLM-A-012245 (14-20-0256 404)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Assiniboine Souix

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
East Poplar Unit

9. WELL NO.
No. 26

10. FIELD AND POOL, OR WILDCAT
East Poplar Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SW NE Section 23, T28N, R51E

12. COUNTY OR PARISH
Roosevelt

13. STATE
Montana

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
SEP 30 1976
Billings, Montana

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Murphy Oil Corporation

3. ADDRESS OF OPERATOR
P.O. Box 547, Poplar, Montana 59255

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' from the North line and 1980' from the East line

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
2181' G.L.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

This well was plugged and abandoned as follows:

A bridge plug was set at 4700' with a 10' cement plug on top. The casing was cut off at approximately 2009' and a 50 sack cement plug set at the top of the casing stub. A 100' cement plug was set at the bottom of the 9-5/8" surface casing, 50' in and 50' out. A 10' cement plug was set at the top of the surface pipe. The surface casing will be cut off 4' below ground level and a steel cap welded on top of the 9-5/8" casing. No dry hole marker is to be erected.

Surface restoration will be completed by November 1, 1976.

Proprietary / Confidential Information
U. S. Govt Use Only

18. I hereby certify that the foregoing is true and correct

SIGNED Buey D. Melear TITLE District Superintendent DATE September 28, 1976

(This space for Federal or State office use)

APPROVED BY James K. Mules TITLE ADM MINERALS DATE DEC 19 1984

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

POST OFFICE

MURPHY & LEE 4 9 26

Form No. 2
GENERAL RULES
201, 202, 213,
218, 219, 232.1

(SUBMIT IN QUADRUPLICATE)
TO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	X
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

September 28, 1976

Following is a {report of work done} on land {leased} described as follows:

LEASE East Poplar Unit No. 26

MONTANA (State) Roosevelt (County) East Poplar Unit (Field)

Well No. 26 SW NE (m. sec.) Section 23, T28N (Township) R51E (Range) MPM (Meridian)

The well is located 1980 ft. from {N} line and 1980 ft. from {E} line of Sec. 23

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is 2181' G.L.

READ CAREFULLY — **DETAILS OF PLAN OF WORK** — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

This well was plugged and abandoned as follows:

A bridge plug was set at 4700' with a 10' cement plug on top. The casing was cut off at approximately 2009' and a 50 sack cement plug set at the top of the casing stub. A 100' cement plug was set at the bottom of the 9-5/8" surface casing, 50' in and 50' out. A 10' cement plug was set at the top of the surface pipe. The surface casing will be cut off 4' below ground level and a steel cap welded on top of the 9-5/8" casing. No dry hole marker is to be erected.

Surface restoration will be completed by November 1, 1976.

LOCATION INSPECTED & APPROVED

Approved subject to conditions on reverse of form

Date OCT 16 1984

By Blaine Kaufman
District Office Agent

Company Murphy Oil Corporation

By Billy D. McLean

Title District Superintendent

Address P.O. Box 547, Poplar, Montana 59255

COMMISSION USE ONLY
API WELL NUMBER
25 (STATE) 085 (COUNTY) 05017 (WELL)

NOTE:—Reports on this form to be submitted to the District Agent for Approval in Quadruplicate

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL.

OVER

2

Locate well by footage measurement from legal subdivision line, lease or property line and nearest drilling or producible well, if any.

Form No. 2
File at
Billings
or Shelby

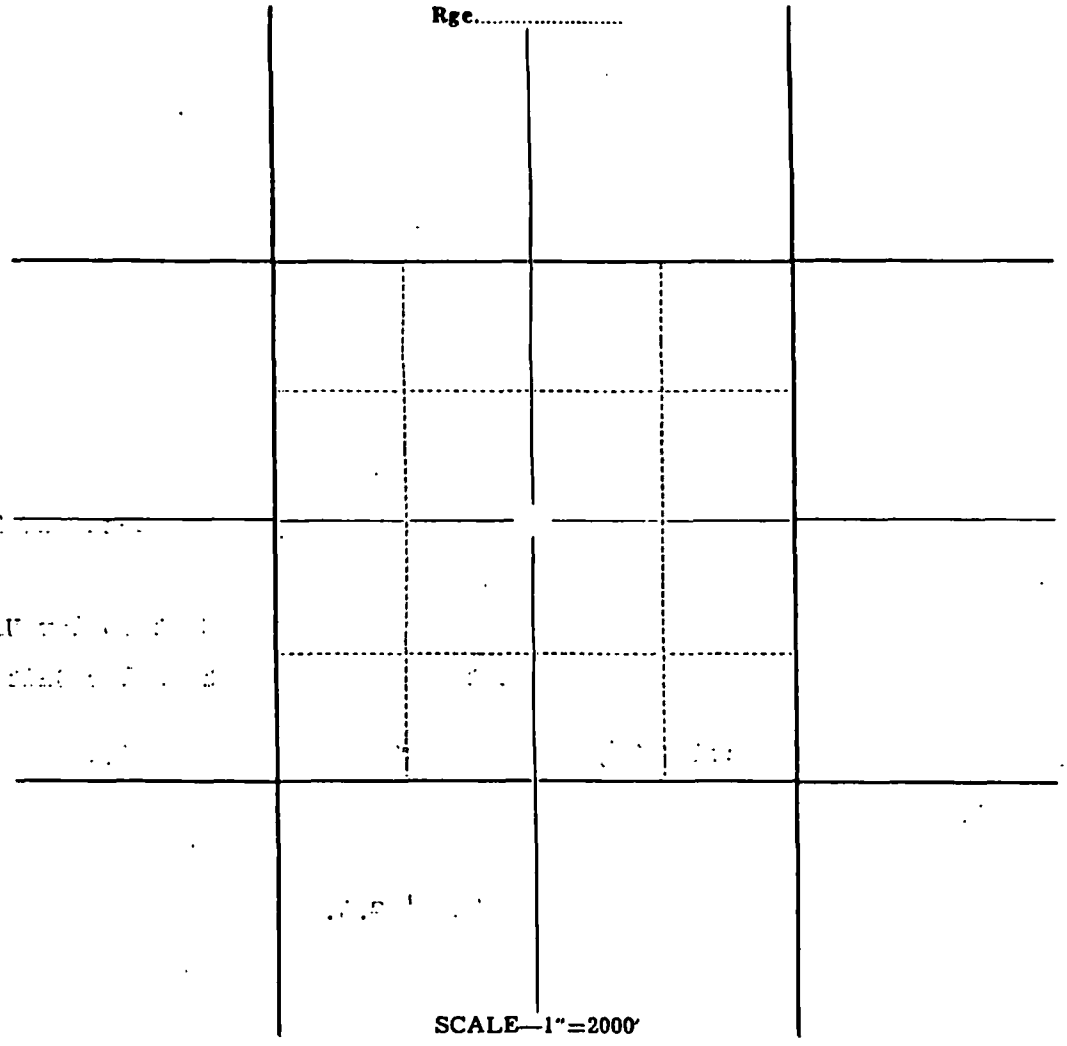
Rge.....

Form No. 2
File at
Billings
or Shelby

Locate
Well
Correctly

Locate
Lease
Boundary

Twp.....



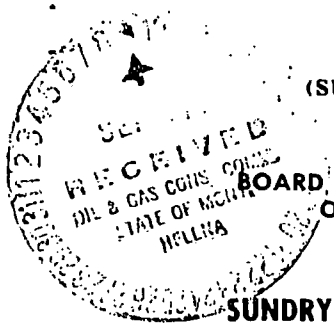
SCALE—1"=2000'

THE NOTICE OF INTENTION TO DRILL THIS WELL IS APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:

1. Any person, before commencing the drilling of any oil or gas well, shall secure from the commission a drilling permit and shall pay to the commission therefor for the following amounts: for each well whose estimated depth is thirty-five hundred (3,500) feet or less, twenty-five dollars ($25.00); from thirty-five hundred and one (3,501) feet to seven thousand (7,000) feet, seventy-five dollars ($75.00); seven thousand (7,000) feet and deeper; one hundred fifty dollars ($150.00).
2. No well is to be spudded in unless the proper surety drilling bond has been posted and approved by the Oil and Gas Conservation Commission of the State of Montana.
3. Cable tool operators must construct an adequate sump to contain all mud and water bailed from the hole.
4. Surface or conductor casing must be properly cemented by an approved method to act as a tie in case an unexpected flow of oil, gas, or water should be encountered, unless special permission has been granted for formation shut-off.
5. Any contemplated change in status of a well such as to plug and abandon, deepen, plug back, redrill, alter casing, etc., must be presented on Sundry Notices and Report of Wells form for approval by agent prior to commencement of work.
6. All substantial showings of oil or gas must be tested for commercial possibilities before drilling ahead. Each such showing must be adequately protected by casing, mud or cement, as drilling progresses.
7. The production string must be cemented unless a formation shut-off or packer is approved by the agent. Sufficient cement must be used to protect the casing and possible productive formation exposed in the process of drilling not otherwise protected.
8. All production strings of casing must be tested by bailing or pressure to determine if there is a tight bond with the formation or possible leaks in the casing. The results of the test must be reported on Sundry Notices and Report of Wells form, said report to include the size, weight, thread and length of casing, amount of cement used, and date work is done. If test shows failure, the defect must be corrected before any drilling operations are resumed.
9. A satisfactory drilling record must be kept for each tour, showing top and thickness of each and all formations drilled and all other information of value, one copy of which is to be kept at the rig while drilling is in progress for examination when an agent visits the well.
10. All producing wells must be marked with name of the operator, number of the well, and location, using reasonable precautions to preserve these markings at all times.
11. Copies of all directional surveys, electrical logs, or tops from electrical log if electric survey is run, formation tests, and cementing record, as furnished by the cementing company, etc., must be filed with the State Inspector of the district together with four copies of the log, upon completion of the well.
12. All work must be done in conformity with the regulations of the Oil & Gas Conservation Commission of the State of Montana, as contained in "General Rules and Regulations," and amendments thereto, as well as regulations prescribed in lieu thereof.

Form No. 2

GENERAL RULES
201, 202, 213,
216, 218, 230,
231, 232

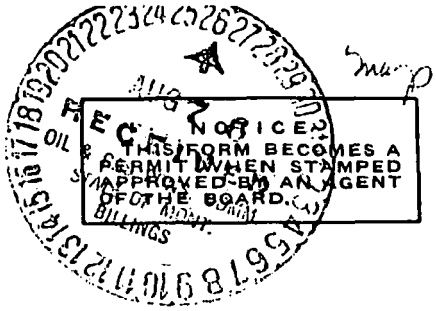


(SUBMIT IN QUADRUPLICATE)

TO

BOARD OF OIL AND GAS CONSERVATION
OF THE STATE OF MONTANA

BILLINGS OR SHELBY



SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well	X	Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

August 24, 19 76

Following is a {notice of intention to do work / ~~report of work done~~} on land {~~owned~~ / leased} described as follows:

LEASE East Poplar Unit No. 26

MONTANA (State) Roosevelt (County) East Poplar Unit (Field)

Well No. 26 SW NE (m. sec.) Section 23 T28N (Township) R51E (Range) MPM (Meridian)

The well is located 1980 ft. from {N / ~~S~~} line and 1980 ft. from {E / ~~W~~} line of Sec. 23

LOCATE WELL SITE ACCURATELY ON PLAT ON BACK OF THIS FORM.

The elevation of the ground or K.B. above the sea level is 2181' G.L.

READ CAREFULLY — **DETAILS OF PLAN OF WORK** — READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings, cementing points, and all other important proposed work, particularly all details of Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

It is proposed to plug and abandon this well as follows:

Set a bridge plug with wireline at 4700' with a 10' cement plug on top.
Cut 5-1/2" casing off at approximately 3600' and set a 50 sack cement plug at top of casing stub.
Set a 100' cement plug at the top of the Dakota Sand, 3202'.
Set a 100' cement plug (50' in and 50' out) at bottom of 9-5/8" surface casing.
Set a 10' cement plug at top of surface casing. The surface casing will be cut off 4' below ground level and a steel cap welded on top of the 9-5/8" casing.
No dry hole marker is to be erected.

Approved subject to conditions on reverse of form

Date SEP 7 1976

By [signature] District Office Agent / Title

Company MURPHY OIL CORPORATION

By [signature]

Title District Superintendent

Address P.O. Box 547, Poplar, Montana 59255

BOARD USE ONLY
API WELL NUMBER
25 — STATE — COUNTY — WELL

NOTE:—Reports on this form to be submitted to the appropriate District for approval

WHEN USED AS PERMIT TO DRILL, PERMIT EXPIRES 90 DAYS FROM DATE OF APPROVAL IF WELL NOT SPUDDED OR EXTENSION REQUESTED.

OVER

Locate well by footage measurement from legal subdivision (Section) line
and nearest drilling or producible well, if any.

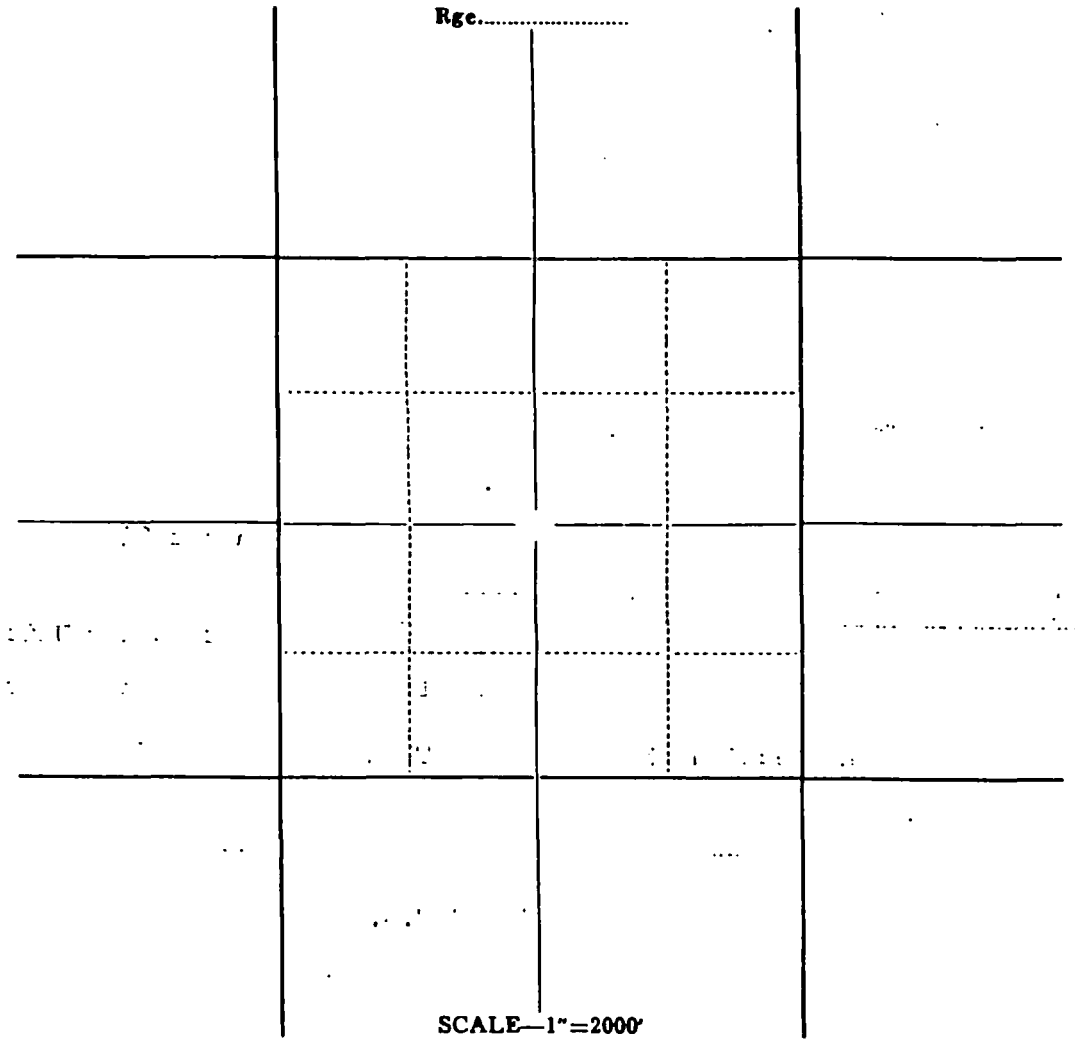
Form No. 2
File at
Billings
or Shelby

Rge.....

Form No. 2
File at
Billings
or Shelby

Locate
Well
Correctly

Twp.....



SCALE—1"=2000'

THE NOTICE OF INTENTION TO DRILL THIS WELL IS APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:

1. Any person, before commencing the drilling of any oil or gas well or water source or injection well shall secure from the Board a drilling permit and shall pay to the Board the following amounts: for each well whose estimated depth is thirty-five hundred (3,500) feet or less, twenty-five dollars ($25.00); from thirty-five hundred and one (3,501) feet to seven thousand (7,000) feet, seventy-five dollars ($75.00); seven thousand and one (7,001) feet and deeper, one hundred fifty dollars ($150.00).

2. No well is to be spudded in unless the proper surety drilling bond has been posted and approved by the Board of Oil and Gas Conservation of the State of Montana.

3. Cable tool operators must construct an adequate sump to contain all mud and water bailed from the hole.

4. Surface or conductor casing must be properly cemented by an approved method and pressure tested to determine a tight bond with the surrounding formations in case an unexpected flow of oil, gas or water should be encountered, unless special permission has been granted for formation shut-off.

5. Any production casing must be cemented unless a formation shut-off or packer is approved by the Board. Sufficient cement must be used to protect the casing and all possible productive and fresh water bearing formations exposed in the process of drilling and not otherwise protected.

6. All production casing must be tested by bailing or pressure to determine if there is a tight bond with the surrounding formations or possible leaks in the casing. The results of the test must be reported on Form No. 2, said report to include the size, weight, thread and length of casing, amount of cement used, and date work is done. If test shows failure, the defect must be corrected before any drilling operations are resumed.

7. Any contemplated change in status of a well such as to plug and abandon, deepen, plug back, redrill, alter casing, etc. must be presented on Form No. 2 for approval by the Board prior to commencement of work.

8. A satisfactory drilling record must be kept for each tour, showing top and thickness of each and all formations drilled and all other information of value, one copy of which is to be kept at the rig while drilling is in progress for examination by any authorized agent of the Board.

9. All producing wells must be marked with name of the operator, number of the well and location, using reasonable precautions to preserve these markings at all times.

10. Delivery to the Board of two copies of all surveys, reports, analyses, logs, tests, samples and core descriptions, etc., as described in Rule 230 and one copy of all cementing records as furnished by the cementing company and described in Rule 234.

11. All work must be done in conformity with the regulations of the Board of Oil and Gas Conservation of the State of Montana, as contained in "General Rules and Regulations," and amendments thereto, as well as regulations prescribed in lieu thereof.